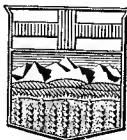


ANNUAL REPORT
OF THE
Department of Lands and Mines
OF THE
PROVINCE OF ALBERTA
FOR THE
Fiscal Year Ended March 31st
1949

PUBLISHED BY ORDER OF THE LEGISLATIVE ASSEMBLY



EDMONTON:
PRINTED BY A. SHNITKA, KING'S PRINTER
1950

To the Honourable J. C. Bowen,
Lieutenant Governor of the Province of Alberta.

SIR:

I have the honour to submit the Report of the Department of Lands and Mines for the fiscal year ended March 31st, 1949.

I have the honour, to be, Sir,

Your obedient servant,

N. E. TANNER,
Minister of Lands and Mines.

Edmonton, January 24th, 1950.

TABLE OF CONTENTS

	Page
REPORT OF THE DEPUTY MINISTER	9
I—LANDS ADMINISTRATION	
Report of the Provincial and School Lands Division	10
II—FORESTRY ADMINISTRATION	
Report of the Director of Forestry	18
Report of the Radio Superintendent	32
Report of the Northern Alberta Forest District	35
Report of the Crowsnest-Bow River Forest Reserve	42
Report of the Clearwater Forest Reserve	46
Report of the Brazeau-Athabaska Forest Reserve	49
Report of the Cypress Hills Forest Reserve	53
III—FISHERIES AND GAME ADMINISTRATION	
Report of the Fish and Game Commissioner	56
Report of the Superintendent of Game	61
Report of the Superintendent of Fisheries	73
IV—MINING LANDS ADMINISTRATION	
Report of the Mining Lands Division	87
V—TECHNICAL DIVISION	
Report of the Technical Division	97
VI—ACCOUNTS ADMINISTRATION	
Report of the Accountant	117
VII—REGISTRATION DIVISION	
Report of the Registrar	133

GOVERNMENT OF ALBERTA
DEPARTMENT OF LANDS AND MINES

Resulting from the transfer on October 1st, 1930, of Alberta's natural resources from federal to provincial control, the Department of Lands and Mines was on this date brought into being by the Alberta Government. The general purpose of the new Department was to be one of supervision and management of the resources in question.

Ministers of the Department, responsible at different periods for this administration, appear as follows:

Hon. R. G. Reid, appointed October 2nd, 1930.
Hon. Hugh W. Allen, appointed July 10th, 1934.
Hon. Charles C. Ross, appointed September 3rd, 1935.
Hon. N. E. Tanner, appointed January 5th, 1937.

CHIEF OFFICERS
DEPARTMENT OF LANDS AND MINES
March 31st, 1949

Honourable N. E. Tanner *Minister of Lands and Mines*
John Harvie *Deputy Minister of Lands and Mines*
I. N. McKinnon *Assistant Deputy Minister*
V. A. Wood *Director of Lands*
F. D. Morrison *Agent, Calgary Land Agency*
R. Cruickshank *Agent, Peace River Land Agency*
H. H. Somerville *Superintendent of Mining Lands*
H. Ingrey *Inspector of Mining Rights*
E. S. Huestis *Director of Forestry*
J. L. Janssen *Chief Timber Inspector*
A. Earnshaw *Radio Superintendent*
J. P. Alexander *Supt. Crowsnest-Bow River Forest Reserve*
J. R. H. Hall *Supt. Clearwater Forest Reserve*
D. Buck *Supt. Brazeau-Athabasca Forest Reserve*
R. T. Mackey *Chief Ranger, Cypress Hills Forest Reserve*
E. S. Huestis *Fish and Game Commissioner*
D. E. Forsland *Superintendent of Game*
H. B. Watkins *Superintendent of Fisheries*
T. W. Dalkin *Superintendent of the Technical Division*
J. L. Crawford *Chief Inspector of Mines*
J. W. Patrick *Accountant*
C. B. Kenway *Registrar*

The Petroleum and Natural Gas Conservation Board
Head Office: Calgary

I. N. McKinnon *Chairman*
D. P. Goodall *Deputy Chairman*
G. W. Govier *Member*

REPORT OF THE Department of Lands and Mines

1948-1949

HONOURABLE N. E. TANNER,
Minister of Lands and Mines,
Edmonton.

Sir:

I have the honour to submit the nineteenth and last report of the Department of Lands and Mines for the fiscal year ending March 31st, 1949.

Much of the work during the past year has been concerned with the breaking down of the work in line with the legislation passed on March 31st, 1948, being Chapters 2 and 3 of the Statutes of Alberta, whereby the Department of Lands and Forests and the Department of Mines and Minerals were created. This did not affect those branches which were being included in their entirety in either of the new departments, but it did affect considerably those branches like the Accounts, Registration and Technical, which are service branches for the Department in general. In these cases, records and staff had to be separated in readiness for the contemplated split. The transfer of the Special Areas to the Department of Municipal Affairs created further additional work. Therefore, it became necessary to rewrite all the Acts transferring the responsibilities to the new Departments.

From the standpoint of revenue the past year has been exceptional, gross receipts amounted to \$24,491,345.78, more than three times the amount collected in the previous year which amounted to \$7,752,823.80, and roughly four times the amount of \$6,196,130.56 collected in 1946-47. Net revenue increased in nearly all phases of the work but none as phenomenally as petroleum and natural gas. Net revenue amounted to \$17,360,429.11, an increase over the previous year of \$12,309,691.72, and petroleum and natural gas provided roughly eleven million of this increase. The surplus on income account amounted to \$15,775,044.95.

The reports of the individual branches will give in detail the work performed during the year.

All of which is respectfully submitted.

J. HARVIE,
Deputy Minister.

January 17th, 1950.

Provincial and School Lands Administration

REPORT OF THE DIRECTOR OF LANDS, V. A. WOOD

Two Acts, to create a Department of Lands and Forests and a Department of Mines and Minerals, were assented to on March 31, 1948. Therefore, the Department of Lands and Mines, created when the natural resources were transferred from the Dominion of Canada to the Province of Alberta on October 30th, 1930, is being split into two Departments. The new Departments will come into force April 1st, 1949, with Honourable N. E. Tanner, as Minister for both Departments, John Harvie as Deputy Minister of Lands and Forests and I. N. McKinnon as Deputy Minister of Mines and Minerals.

The Provincial Lands Act was repealed as of March 31st, 1949, and as a consequence all regulations established by Order in Council under the Provincial Lands Act are also repealed.

The Public Lands Act, assented to March 29th, 1949, replaces The Provincial Lands Act. This Act applies generally to lands vested in the Crown in the right of the Province and includes regulations governing Homestead Leases, Cultivation Leases and Grazing Leases. Extracts of The Public Lands Act pertaining to these regulations will be published in booklet form for distribution to the public. New regulations governing the issue of Grazing Permits, Hay Permits, Accrued Area Leases, etc., will be established by order in council under The Public Lands Act.

An important transaction during the year was the transfer by Order in Council to the Department of Municipal Affairs of all duties, powers and functions hitherto assigned to and performed by this Department under the provisions of The Special Areas Act. In accordance with this Order in Council, 1,646 Grazing Leases and 6 reserves, comprising 2,558.282 acres; 1,172 Cultivation Leases, comprising 305,163.18 acres and 13 sales comprising 2,075.62 acres, approximately, have been transferred to the Department of Municipal Affairs for administration purposes.

Another important transaction was the transfer by Order in Council of the authority vested in the Minister of Public Works with regard to the leasing of road allowances in the southern section of the province to the Minister of Lands and Mines. In accordance with this Order in Council, 342 leases have been transferred from the Department of Public Works to this Department for administration purposes.

Thirty veterans commenced farming in the spring of 1948 in Block 1, Township 79, Ranges 2 and 3, West of the 6th Meridian, in the Wanham area on lands cleared and broken by contract under the Government Clearing and Breaking Project. Due to drought the majority of the veterans on the project experienced a crop failure.

In cases where veterans settling under the Government Clearing and Breaking Project were unable to finance the cost of seed, the Department of Agriculture made arrangements with them, to advance seed grain, repayable on the basis of a one-sixth crop share. According to the arrangement this Department is responsible for the collection of the one-sixth share of the crop, in addition to the one-third share of the crop required under the terms of the lease.

During the year an additional 16 veterans were settled on land cleared and broken in Block 2, Township 78, Ranges 2 and 3, west of the 6th Meridian.

On May 15th the Government entered into an agreement with Nick Johnson and Edward Johnson to clear, break and prepare for seed 960 acres in Township 79, Range 1, West of the 6th Meridian and on October 26th completed an agreement with K. Waters to clear, break and prepare for seed 6,720 acres in Townships 79 and 80, Range 2, West of the 6th Meridian.

The other contractors, Lassiter's Limited, Mix Brothers and Peter Simonsen, continued clearing and breaking operations during the fiscal year. Lassiter's Limited practically completed clearing and piling on the lands in Block 2, Townships 77 and 78, Ranges 1, 2 and 3, West 6th Meridian and expect to break and prepare the land for crop during the coming summer months. Mix Brothers and P. Simonsen also completed most of the clearing and piling on the land contained in their contracts.

World wheat requirements for the first time since the war have been brought into reasonable balance with production. The increased production of wheat and rye has eliminated bread rationing in some countries.

On April 1, 1948, the Canadian Wheat Board fixed the price of wheat at \$1.55 per bushel for No. 1 Northern at Fort William and Vancouver and under the five-year wheat contract western farmers are assured of receiving not less than \$1.55 per bushel for No. 1 Northern Wheat up to July 31st, 1950. The price of \$1.55 per bushel is retroactive to wheat delivered to elevators for the years 1945 to April 1st, 1948.

Wheat seeding in Alberta was practically completed by June 20th and harvesting by November 20th. Crops were generally light, due to drought. Frost caused slight damage, especially in the Peace River area, during the last week of August.

The Canadian Wheat Board announced that effective August 31st the delivery quota on wheat, oats and barley would be ten bushels per seeded acre, except at certain specific points. However, all quotas were removed in Alberta on November 26th.

Oats, barley and flax were sold on the open market, the average price for oats being approximately 55c per bushel, barley 65c per bushel and flax \$4.00.

In addition to crop share payments received on crop-share leases the following payments were received by the Department as landlord on crop shares delivered prior to 1948.

Patronage Dividends (representing payments made by six companies)	\$ 198.84
Final payment by Canadian Wheat Board on 1943 Producers' Certificates	6,775.06
Part payment by Canadian Wheat Board on 1944 Producers' Certificates	132.92
Payments received from Canadian Wheat Board on 20c wheat adjustments made retroactive to August 1, 1945:	
1945—\$11,778.82	
1946—42,765.66	
1947—33,767.43	88,311.91

(This payment represents approximately 60% of the amount payable on the first 20c wheat adjustment)

The Calgary Agency, in operation since the transfer of the resources in 1930, was officially closed on March 23rd. In its place an office of information has been opened with A. H. Norden in charge. The Peace River Agency was continued and Sub-Agencies were maintained at Athabasca, Bonnyville, Grande Prairie, Hines Creek, Lac La Biche and Rocky Mountain House.

The inspection work was carried out by seven permanent inspectors and during the summer months five agricultural students from the University of Alberta were temporarily employed.

In addition to their ordinary inspections the permanent inspectors conducted a number of auction sales of land during the winter and early spring. This arrangement proved very satisfactory.

The following is a summary of field inspections:

SOIL SURVEY

Requests outstanding on April 1, 1948	394
Requests called during fiscal year	1,040
Reports received during fiscal year	958
Requests outstanding at March 31, 1949	476

GENERAL, GRAZING AND SCHOOL LAND

Requests outstanding at April 1, 1948	730
Requests called during fiscal year	2,640
Reports received during fiscal year	2,327
Requests outstanding at March 31, 1949	1,043

A large number of inspections outstanding accumulated during the winter and spring months, when the inspectors were not in the field.

Collections

The Inspector of Collections was in the field from May 7th to December 18th when weather conditions prevented further travel. Later in the winter two weeks were spent assisting at auction sales of land.

Approximately five hundred and fifty calls were made and the sum of \$19,000.00 cash in past due accounts was collected. Quite a percentage of this amount was the result of investigating cases where the lessees reported harvesting slightly under five bushels per acre.

In addition to collections the inspector reported on over one hundred applications for renewal of cultivation and grazing leases.

Orders In Council

The following orders in council affecting land administration were passed during the fiscal year:

O.C. 459/48, dated April 24, 1948.

Agriculture Lease regulations were amended and consolidated and Homestead Lease regulations were established.

Under the Homestead Lease regulations a crop share is only payable on the crops grown on the areas set forth in the cultivation schedule of the regulations, rather than on the total area cultivated, as was formerly required in the Agricultural Lease regulations. A homestead lessee performing the residence duties by residing on land in the vicinity is required to do more cultivation duties during the first nine years of the lease than is required where residence duties are performed on the leasehold. The lessee may now purchase, after the lease has been in force for five years and is in good standing, at the rate of \$100.00 for the first quarter section and \$1.25 per acre for each additional acre.

The advantages contained in the new Homestead Lease regulations are extended to agricultural lessees.

O.C. 463/48, dated April 26, 1948.

This order in council replaces O.C. 1171/45 and restricts the acceptance of applications for Cultivation and Grazing Leases and Homestead Leases to certified veterans, and to persons who are residing and have been in continuous residence in the Province of Alberta for a period of two years prior to the date of making application. Under O.C. 1171/45 the residence requirements applied to all types of leases.

O.C. 550/48, dated May 12, 1948.

All duties, powers and functions in connection with the Special Areas to be transferred to the Department of Municipal Affairs, dating on, from and after June 1st, 1948.

O.C. 780/48, dated July 8th, 1949.

Grazing Lease rentals were fixed at 10% of the forage value for all lands leased outside of the area known as the Special Areas and 8% of the forage value for all lands within the Special Areas.

O.C. 118/49, dated January 31st, 1949.

The authority vested in the Minister of Public Works with regard to the leasing of road allowances in the southern part of the province, transferred to and vested in the Minister of Lands and Mines. This authorizes the Minister of Lands and Mines to lease any unused road allowance in that part of the province which includes and lies south of Improvement District No. 50, Municipal Districts Nos. 49, 48, and 47, and Special Areas Nos. 2 and 3.

The following is a summary of other business transacted:

ACCRUED AREA LEASES

	No.	Area
Leases in force at April 1, 1948	605	45,575.59
Leases issued during fiscal year	108	6,349.62
Leases cancelled during fiscal year	95	10,136.27
Leases in force at March 31, 1949	618	41,788.94

HOMESTEAD LEASES—CIVILIAN

Leases in force at April 1, 1948	1,808	364,670.04
Leases issued during fiscal year	754	166,817.30
Leases cancelled during fiscal year	229	49,276.49
Leases in force at March 31, 1949	2,333	482,210.85

HOMESTEAD LEASES—VETERAN

	No.	Area
Leases in force at April 1, 1948	1,356	355,432.68
Leases issued during fiscal year	202	54,037.08
Leases cancelled during fiscal year	85	21,147.09
Leases in force at March 31, 1949	1,473	388,342.67

LICENSES OF OCCUPATION

Licenses in force April 1, 1948	152	3,466.87
Licenses issued during fiscal year	17	369.90
Licenses cancelled during fiscal year	5	28.34
Licenses in force at March 31, 1949	164	3,808.43

MISCELLANEOUS LEASES

Leases in force at April 1, 1948	162	10,589.97
Leases issued during fiscal year	22	1,263.92
Leases cancelled during fiscal year	11	1,213.21
Leases in force at March 31, 1949	173	10,640.68

TOWNSITE LEASES

Leases in force at April 1, 1948	8	.....
Leases issued during fiscal year	0	.....
Leases cancelled during fiscal year	0	.....
Leases in force at March 31, 1949	8	.....

MINERAL SURFACE LEASES

Leases in force at April 1, 1948	14	17,820.91
Leases issued during fiscal year	0	.....
Leases cancelled during fiscal year	1	193.50
Leases in force at March 31, 1949	13	17,627.41

FUR FARM LEASES

Leases in force at April 1, 1948	11	1,578.90
Leases issued during fiscal year	0	.....
Leases cancelled during fiscal year	1	225.00
Leases in force at March 31, 1949	10	1,343.90

CULTIVATION AND GRAZING LEASES

Leases in force at April 1, 1948	434	78,490.38
Leases issued during fiscal year	137	25,316.51
Leases cancelled during fiscal year	57	11,966.02
Leases in force at March 31, 1949	514	91,840.87

CULTIVATION AND GRAZING LEASES — 21 year

Leases in force at April 1, 1948	7	2,070.93
Leases issued during fiscal year	0	.....
Leases cancelled during fiscal year	0	.....
Leases in force at March 31, 1949	7	2,070.93

CULTIVATION AND GRAZING LEASES—6 years—Special Areas

Leases in force at April 1, 1948	830	218,702.92
Leases issued April 1 to May 31, 1948	1	160.00
Leases cancelled April 1 to May 31, 1948	30	8,087.01
Leases in force when transferred to Department of Municipal Affairs, June 1, 1948	801	210,775.91

CULTIVATION AND GRAZING LEASES—20 years—Special Areas

Leases in force at April 1, 1948	265	70,956.05
Leases issued April 1 to May 31, 1948	34	9,227.44
Leases cancelled April 1 to May 31, 1948	11	3,553.20
Leases in force when transferred to Department of Municipal Affairs, June 1, 1948	288	76,630.29

IRRIGATION LEASES—Special Areas

Leases in force at April 1, 1948	4	628.00
Leases issued April 1 to May 31, 1948	0	.....
Leases cancelled April 1 to May 31, 1948	0	.....
Leases in force when transferred to Department of Municipal Affairs, June 1, 1948	4	628.00

PROVINCIAL LANDS SALES

Sales in force at April 1, 1948	215	13,536.07
Sales granted during fiscal year	174	7,031.14
Sales cancelled during fiscal year	5	530.10
Sales patented during fiscal year	130	3,399.45
Sales in force at March 31, 1949	254	16,637.66

RIGHTS OF ENTRY

Rights of entry in force at April 1, 1948	76	.....
Applications received	45	.....
Rights of entry cancelled	12	.....
Rights of entry granted	21	.....
Applications pending	46	.....
Rights of entry in force at March 31, 1949	85	.....

CANCELLATIONS

Homestead and Soldier Grants	61
------------------------------------	----	-------

NOTIFICATIONS FOR TITLE—(Homestead)

	No.	Area
Applications on hand at April 1, 1948	337	.....
Applications received during fiscal year	92	.....
Notifications for title issued during fiscal year....	278	.....
Applications on hand (checked and waiting completion)	151	.....
Unpatented homesteads and soldier grants	214	.....
MISCELLANEOUS SQUATTERS PERMITS issued during fiscal year	647	.....
MISCELLANEOUS PERMITS FOR BUILDING SITES on trap lines issued during fiscal year	168	.....
GRAZING PERMITS issued	2,422	470,310.38
CULTIVATION PERMITS issued	197	5,020.43
HAY PERMITS issued	1,039	.....
Total number of tons 11,391		
HAY SEIZURES	1	.....
Total number of tons, 7		
ASSIGNMENTS REGISTERED (Leases, Permits and Sales)	822	.....

GRAZING

The average price of all grades of cattle sold on the Calgary market from July 1st to December 31, 1948, inclusive, was 16.57c per pound as compared with 10.94c per pound for the same period in 1947. Consequently the grazing rental and tax rate for the 1949 season for Grazing Leases and Grazing Permits were increased over the 1948 rental and tax rate as follows:

	1948	1949
1 head to 24 acres	11 1/2c per acre	17 1/4c per acre
1 head to 32 acres	8 1/2c per acre	13 c per acre
1 head to 40 acres	6 3/4c per acre	10 1/4c per acre
1 head to 50 acres	5 1/2c per acre	8 3/4c per acre

There were fifteen Departmental Grazing Reserves and Community Pastures in operation and six Community Pastures in process of formation at the commencement of the fiscal year. The Blackfoot Provincial Grazing Reserve was cancelled and a grazing reserve under long term lease issued to the Blackfoot Stock Association.

During the year the department completed the formation of the Nemiscam Reserve, the Drowning Ford Reserve, the Cherry Grove Reserve and the Blackfoot Reserve. These are operated by grazing associations and are issued under long term Grazing Leases. During the year, work was commenced on the formation of the Comrey Reserve situated in Townships 3 and 4, Range 2 and Townships 3, 4 and 5, Range 3, all West of the 4th Meridian. The Poll Haven Reserve and Wainwright Reserve are still in process of formation.

The following is a summary of the Grazing Reserves and Community Pastures:

*Departmental Reserves (Permanent Caretakers)**Vauxhall Provincial Grazing Reserve*

Area, 165,500 acres. Eighty miles of fencing on Reserve. Additional help was employed during the year for range riding, and building and repairing fences. Permits issued for grazing, 90, covering 3,245 cattle, 16 horses and 1,483 sheep.

Twin River Provincial Grazing Reserve

Area 20,500 acres. Twenty-four miles of fencing. Permits issued, 55, covering 1,331 cattle and 12 horses. The Department

built a two-room house for the caretaker so that he would have a residence on the Reserve during the grazing months. At a later date a stable was built to accommodate his horses. This arrangement gives much better service to the patrons as the caretaker is present on the Reserve during the entire grazing season.

Reserves Handled by Association (Association is responsible for upkeep and for care of stock)

Tulliby Lake Provincial Grazing Reserve:
22,000 acres. One permit issued, covering 250 cattle.

GRAZING RESERVES UNDER LONG TERM LEASE BY ASSOCIATION

Castle River Reserve	6,318	acres
Fir Grove Reserve	3,750	"
Ross Lake Reserve	4,473	"
Barnwell Reserve	5,467	"
M.D. of Eureka Reserve	3,993	"
Pipeline Reserve	22,697	"
Many Island Reserve	16,078	"
Hilda Reserve	26,350	"
Bluefield Reserve	11,602	"
M.D. of Forty Mile—Bow Island Reserve	24,366	"
Bowell West Reserve	8,211	"
Rocky Coulee Reserve	4,432	"
Drowning Ford Reserve	33,069	"
Blackfoot Reserve	24,614	"
Nemiscam Reserve	4,781	"
Cherry Grove Reserve	1,274	"

LONG-TERM GRAZING LEASES

LANDS BRANCH	No.	Area
Leases in force April 1, 1948	1,897	2,673,527.00
Leases issued	416	634,820.00
Area added to existing leases .....	.....	18,066.00
Leases cancelled	384	550,964.00
Area withdrawn .....	.....	7,865.00
Total number and area of existing leases	1,929	2,767,584.00
SPECIAL AREAS		
Leases in force April 1, 1948	1,541	2,155,969.00
Leases issued	196	282,809.00
Area added to existing leases .....	.....	69,395.00
Leases re-instated	2	480.00
Leases cancelled	93	198,992.00
Area withdrawn .....	.....	11,849.00
Total number and area of existing leases as of June 1, 1948	1,646	2,297,812.00

All Special Areas leases and reserves transferred to Department of Municipal Affairs by authority of Order in Council No. 550/48 dated May 12, 1948, effective June 1, 1948.

Details pertaining to the revenue in connection with the administration of Provincial Lands may be found in the report of the Accounting Division of this Department.

Note: The term "Leases Cancelled during the fiscal year," includes leases which expired.

SCHOOL LANDS

During the fiscal year a number of auction sales of land were held throughout the Province and as a result 230 new School Land Sales with a total purchase price of \$378,285.65 were opened. This is the largest sale of School Lands in any year since the transfer of the resources to the Province of Alberta in 1930. The purchasers were required to pay a minimum of 20% of the purchase price at the time of the sale and the balance in nine equal instalments with interest at rates prescribed by The Public Lands Act.

Due to high prices for grain and livestock, collections have been very good and during the year 137 School Land Sales were patented.

The total revenue received on School Land Sales amounted to \$191,320.24, made up as follows:

Principal	\$174,524.57
Interest	15,595.57

The following is a summary of other School Land business transacted:

	No.	Area
School Land Sales active as at April 1, 1948.....	355	53,698.85
New Sales	230	34,211.90
Sales cancelled	3	329.55
Sales patented	137	20,588.88
School Land Sales active as at March 31, 1949....	445	56,995.81

MISCELLANEOUS LEASES

Leases in force at April 1, 1948	74	2,709.41
Leases issued during fiscal year	4	98.69
Leases cancelled during fiscal year	5	48.80
Leases in force at March 31, 1949	78	2,759.30

LICENSES OF OCCUPATION

Licenses in force at April 1, 1948	48	501.25
Licenses issued during fiscal year	4	5.15
Licenses cancelled during fiscal year	1	2.42
Licenses in force at March 31, 1949	45	503.99

CULTIVATION AND GRAZING LEASES—5 and 10 years

Leases in force at April 1, 1948	1,401	274,534.24
Leases issued during fiscal year	144	26,945.91
Leases cancelled during fiscal year	109	20,757.58
Leases in force at March 31, 1949	1,435	280,718.47

CULTIVATION AND GAZING LEASES—6 years—Special Areas

Leases in force at April 1, 1948.....	87	18,885.08
Leases issued April 1 to May 31, 1948	0	.....
Leases cancelled April 1 to May 31, 1948	8	1,755.10
Leases in force when transferred to Department of Municipal Affairs, June 1, 1948	79	17,128.98

GRAZING PERMITS issued

2,047 500,259.50

CULTIVATION PERMITS issued

48 1,220.50

HAY PERMITS issued

199 2,080 tons

ASSIGNMENTS REGISTERED (Leases, permits and sales)

114

Statement of revenue pertaining to School Lands may be found in the report of the Accounting Division.

Forestry

REPORT OF THE DIRECTOR OF FORESTRY, E. S. HUESTIS

The year 1948-49 was probably unique in the history of forest fire protection in the province of Alberta. From the break-up and the disappearance of snow there was a continued spell of very cold damp weather or continued rains; floods were the order of the day from one end of the province to the other, and there was no spring fire hazard which is usually so prevalent in the Northern Alberta Forest District.

The springtime has always been considered as the period of hazard for the Northern Alberta Forest District, and the late summer and fall the period of greatest hazard for the forest reserves along the eastern slopes of the Rocky Mountains. In this year, the hazard for both was in the fall, and for the entire administration there were several months of rather trying hot dry weather, with increasing fire hazard each week. It was fortunate that the number of fires and the loss of timber was not great compared with many other years.

During the year we had the pleasure of hearing a report from Mr. Robson Black, General Manager of the Canadian Forestry Association, after his visit to the Scandinavian countries, particularly Sweden. He told us that as a rule forest fires are unknown and unexpected in Sweden. The people are taught from childhood that the country depends largely upon its forest wealth, and as a result they are educated to a care with fire in the forest far beyond anything that we have yet dreamed of in this country. It is about time that we took stock of this natural resource and educated our children as those in Sweden have been educated so that when they grow up we will not have the carelessness with fires in forested areas that has existed in this province for a great many years. It seems that we are unable to realize that we are gradually depleting a resource which supplies employment to hundreds of people and is the main source of their income and livelihood.

In the report for the year 1947-48, mention was made of the possibility of being able to proceed with the forest inventory of the province; to get a complete picture of our forest resources in order to make plans for the future, to estimate the amount of timber which could be cut each year without depleting our stocks; and also to assist the timber industry in the location of their timber stands and the planning of their operations on a long-term scale. Negotiations had been going on with the Dominion Government since December of 1946 and they had proposed to the various provinces throughout Canada that they were prepared to bear half the cost of aerial photography and the setting up of a forest inventory in each province at a scale of one inch to one mile. Early in the spring of 1949, the Dominion found themselves in the position of having to abandon this proposal due to the fact that only two of the nine provinces were

prepared to make an agreement with them, namely, Manitoba and Alberta.

Having failed to come to an agreement with the Dominion Government, it was then necessary that we search for ways and means of obtaining our forest inventory through the employment of a commercial company for the photography, and either have this company do our base mapping and inventory or carry it out by the setting up of our own organization. Contact was made with the two principal companies in Canada who were in a position to do this work, namely, Photographic Survey Corporation Limited of Toronto, and Aero Surveys of Vancouver. By the end of the fiscal year negotiations had advanced to the stage that some idea was obtained of the cost to the province of carrying out the work, but nothing final was concluded by March 31st.

At about the same time it was decided by the Minister of Lands and Mines that an outside expert in forestry should be employed as a one-man commission to investigate the forestry set-up in Alberta, our methods of disposing of timber, and to assist us in finding the best methods of disposing of timber, and to assist us in finding the best method of preparing a forest inventory. The man selected, Wallace A. Delahey of Toronto, had had a great deal of experience in the pulp and paper industry in the province of Ontario, and as we were negotiating with two proposed pulp and paper companies at that time to set up an industry in the province, it was felt that Mr. Delahey could give a great deal of very sound advice in our negotiations with these companies. Mr. Delahey was able to make a short trip of investigation prior to the end of the fiscal year and his work will continue throughout 1949 and on into 1950. He is to be employed for a period of one year.

In the year 1947-48 Alberta reached the highest production of timber and other products in its history. The amount of lumber produced in this year was 390 million feet board measure. In the year under review the production did not reach the total of 1947-48, but was not far behind it, the amount of lumber being produced being better than 366 million feet board measure.

With a yearly production as high as the past two years and with a steady swing away from the large mill to the portable mill, it is becoming more and more evident that the waste in connection with logging and lumbering operations is one that will have to be tackled in the very near future. At the present time, with machinery of any kind difficult to obtain and a shortage of steel in the world market, it would be difficult to have a changeover from the present wasteful mills to a better type of mill. However, it is planned to make surveys of this waste and the Dominion Government Forest Products Laboratory has promised to assist us in this investigation.

The forest fire prevention campaign of the Forest Service was well carried out in the spring of 1948, but due to the extended wet period was not as necessary as would have been the case had we had a high fire hazard. Our thanks are due, however, to the radio and the press, who carried on a forest fire prevention campaign periodically throughout the summer and intensified

it in the late summer and fall when the fire hazard continued to increase very rapidly. At that time another fire prevention campaign was inaugurated by the Forest Service, and with the voluntary publicity campaign, particularly by the radio, proved very satisfactory in warning the general public in regard to the handling of fire in the timbered areas.

Our thanks are due to the Canadian Forestry Association for their very fine publicity campaign on behalf of forest protection, both through their tree planting car which has travelled through the province of Alberta on many occasions, and by their lecture tours. Two of these lecture tours were conducted during 1948, one being centralized during the month of August in the Jasper, Banff, Waterton Lakes area and the forest area immediately adjacent. The second tour took in the middle north part of the province, starting about the middle of August and running on through to early in October. Many points along the fringe of settlement and in forested areas were visited by representatives of the Canadian Forestry Association, travelling by truck and showing moving pictures and giving lectures. The advance publicity in connection with these tours was handled by the Alberta Forest Service and one or more of our forest rangers was in attendance at most of the meetings held. This gave the opportunity for closer contact between our forest ranger staff and the general public in those areas where fire is a constant menace during the fire season. The Association reported very fine attendance at most of their meetings.

The annual meetings of forest rangers, which have now become standard practice each year, were held during the month of January. The rangers, with their superintendents and assistants from all forest reserves along the eastern slope of the Rocky Mountains, met in Red Deer on January 11th, 12th and 13th, 1949, and went through an intensive program reviewing their past year's work and organizing and talking over next year's activities. Instructions were given in all phases of both office work and field activities, and all those in attendance returned to their headquarters better qualified and with a desire to do a bigger and better job.

A similar meeting was held in Edmonton on January 25th, 26th and 27th, 1949, of all those rangers in the Northern Alberta Forest District, together with their chief rangers and timber inspectors. The program at this meeting was similar to that of the Red Deer meeting, except that more emphasis was placed on fire detection and suppression and less on new construction and maintenance of improvements. The number of improvement projects in the Northern Alberta Forest District is still limited by the small appropriation allotted for this work.

These ranger meetings, or as we call them, ranger schools, are very necessary at this time with the continual and rapid turnover of forestry personnel. During the war it was difficult to obtain qualified personnel suited to the life of a forest ranger. Following the war, employment was high, wages were high, and the turnover continued at too rapid a rate. It takes time to train a forest ranger in his duties, and with new men continually coming into the service, we cannot expect to get the best from

them in their first year with us. It takes years of experience to know how to fight a forest fire to the best advantage.

It is still evident that the salaries being offered for the positions of assistant ranger and forest ranger are too low compared with what is offered in the commercial field. With the interest in oil and the opening up of the north and the finding of more of our natural resources and their development, it will continue to be difficult to obtain the best men for this very important task of protection of our forest wealth. The men whom we have are doing a good job, and if they remain with us will develop into good rangers.

It is felt that the one single factor that can do more towards the preservation of our forest resources in this province is the education of the people who travel and live in our forests to be careful with fire at all times. We need the forests in the building of a province which, it is predicted, will, in a very few years, be one of the most important provinces in the whole of the Dominion of Canada.

FIRE SUPPRESSION

During the fire season of 1948 a total of 184 fires were dealt with as shown below in classes:

- 31 Class "A" or small fires (less than $\frac{1}{4}$ of an acre).
- 47 Class "B" Fires (over $\frac{1}{4}$ acres up to 10 acres).
- 68 Class "C" Fires (over 10 acres up to 500 acres).
- 38 Class "D" Fires (over 500 acres).

COMPARISON OF FIRE LOSSES BY PERCENTAGES

	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948
Campers	27.4	28.8	26.0	20.9	31.5	26.8	24.0	18.7	14.9	15.5	29.9
Smokers	3.6	5.0	4.8	2.2	3.3	7.5	6.5	8.8	5.5	6.6	12.5
Settlers	14.6	14.8	12.2	22.7	18.9	12.4	14.5	15.1	10.5	7.4	10.9
Railways	4.2	4.6	6.7	7.6	11.1	23.0	16.0	12.0	21.1	32.8	15.2
Lightning	2.3	4.0	2.8	1.6	.9	.4	3.4	6.0	4.4	4.1	3.8
Industrial Operations	1.4	1.4	.6	1.4	3.6	1.9	3.6	3.5	9.5	4.9	8.7
Incendiary	14.6	9.8	8.9	10.8	6.9	5.7	6.8	6.0	2.9	4.1	2.7
Public Works .....	.8	.6	..	.2	.5	.4	..	.4	..	..	..
Unclassified	9.0	13.4	16.9	8.8	10.2	7.5	6.5	13.4	6.9	.8	.6
Unknown	22.1	21.1	21.1	23.8	18.1	14.4	18.7	16.1	24.3	23.8	15.7

RAILWAY FIRE LOSSES, CALENDAR YEAR 1948

This statement deals only with fires burning on forested territory under the supervision of the Alberta Forest Service, and which started within 300 ft. of the centre line of the railway right-of-way.

CAUSES AND NUMBER OF FIRES:

Railway causes—Locomotives	24
Employees	1
Sub-total	25
Other Causes—Campers and travellers	2
Settlers	1
Unknown	7
Unclassified .....	..
Sub-total	10
TOTAL	35

DEPARTMENT OF LANDS AND MINES

NUMBER OF ACRES BURNED

Slashing or old burn	81
Timber Land	NIL
Young growth	563
Not Forested	2,310
TOTAL.....	2,954

LOSS

Timber	NIL
Young Growth	\$1,942.50
Forest Products	NIL
Other Property	NIL
TOTAL.....	\$1,942.50

ANNUAL SUMMARY OF FOREST FIRE LOSSES—CALENDAR YEAR 1948

FIRES WITHIN FOREST RESERVES

UNIT	Number of Fires					LANDS AFFECTED					LOSS										SUPPRESSION COSTS				
	OWNERSHIP				AREA	CONDITION				TIMBER (MERCHANTABLE AND CUT-OVER)						Loss of Timber	Loss of Young Growth	Loss of Other Property	Total Loss	Ranger Service	Other Expenditure	Total			
	Class		Public	Private		Total	Mer- chant- able Timber	Cut-over Timber	Young Growth		SALVABLE			UN SALVABLE											
	A	B	C	D					Acres	Acres	Acres	Acres	Acres	M Ft. B.M.	Cords	\$	M Ft. B.M.	Cords	\$	\$	\$	\$			
Campers	6	1	...	...	7	0.76	...	0.75	0.10	0.25	0.40	...	...	...	1.80	...	2.85	2.85	1.00	...	3.85	28.56	26.00	54.56
Smokers	4	1	1	...	6	21.00	...	21.00	10.50	...	6.00	4.50	...	...	...	...	...	...	...	...	6.50	112.75	533.60	646.36
Settlers .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Railways	1	1	2.00	...	2.00	2.00	0.75
Lightning	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	15,500.06	16,600.00	29.16	29.15
Industrial Operation	5	...	...	...	6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	15,500.00	15,511.10	184.21	669.60
TOTALS	16	8	1	...	20	23.75	...	23.75	10.60	0.25	6.40	6.50	...	...	1.80	1.00	4.95	2.85	8.25	15,500.00	15,511.10	184.21	669.60	

FIRES OUTSIDE FOREST RESERVES

Campers	6	7	20	15	48	144,086.34	90.00	144,176.34	19,735.84	1,000.00	7,482.00	115,958.50	782.00	6,430.00	626.00	6,651.00	84,672.00	36,709.26	54,952.25	16,819.50	...	71,271.75	917.03	20,204.53	21,121.56	
Smokers	6	8	3	17	61	61,021.00	927.00	61,948.00	19,675.50	1,320.00	12,469.00	28,483.60	48.00	28.00	10.00	4,405.00	6,256.00	18,271.00	4,420.50	54,989.00	...	59,409.50	174.83	6,667.40	6,842.23	
Settlers	3	12	5	20	34	34,560.00	1,030.00	35,580.00	6,909.00	10.00	9,910.00	18,751.00	230.00	240.00	200.00	43,020.00	21,261.00	22,200.50	19,625.00	...	41,825.50	495.30	18,341.73	13,847.03		
Railways	2	16	6	3	27	2,841.76	21.50	2,863.25	...	...	...	563.00	2,300.25	...	...	...	...	800.00	...	1,942.50	...	1,942.50	31.36	...	
Lightning	1	2	3	6	6	6,333.50	6.00	6,339.60	72.00	130.00	4,563.00	1,584.50	105.00	700.00	450.00	532.50	10,126.00	...	10,657.50	116.40	6,400.15	6,515.55
Industrial Operation	4	2	4	1	11	566.00	1,616.75	2,171.75	120.00	215.00	...	1,836.75	...	...	...	64.00	4,284.00	2,602.00	2,859.00	...	36.00	2,894.00	209.00	224.33	438.33
Incendiary	2	2	1	5	5	2,904.00	142.00	3,046.00	21.00	20.00	1,762.00	1,243.00	20.00	...	...	...	340.00	210.00	40.00	3,527.00	...	3,567.00	171.99	428.99	600.98
Unclassified .....	...	1	...	1	1	160.00	...	160.00	...	40.00	...	120.00	2.00	...	2.00	...	...	...	...	6.00	...	6.00	16.94	127.05	143.99
Unknown	3	7	12	7	29	36,148.00	760.00	36,908.00	1,468.00	6,820.00	13,413.00	15,207.00	90.00	300.00	240.00	16,020.00	12,270.00	9,441.80	26,450.00	...	34,891.80	882.68	36,923.27	37,805.72
TOTALS	15	44	67	38	164	288,600.69	4,592.25	293,192.84	48,001.34	9,555.00	50,152.00	185,484.50	1,172.00	6,998.00	838.00	11,468.00	155,292.00	87,833.25	94,446.55	131,984.00	35.00	226,465.56	3,014.47	84,327.27	87,341.74	
																					Miscellaneous Expenditure	2,818.21	2,818.21	87,145.48	90,159.95	

FIRES WITHIN AND WITHOUT FOREST RESERVES

Campers	12	8	20	15	55	144,087.09	90.00	144,177.09	19,735.94	1,000.25	7,482.40	115,958.50	782.00	6,430.00	626.00	6,652.80	84,672.00	36,712.10	54,955.10	16,820.60	...	71,276.60	945.69	20,230.63	21,176.12	
Smokers	4	7	9	3	23	61,042.00	927.00	61,969.00	19,686.00	1,320.00	12,475.00	28,487.50	48.00	28.00	10.00	4,405.00	6,256.00	18,272.35	4,420.60	54,995.50	...	59,416.00	287.58	7,201.00	7,488.58	
Settlers	3	12	5	20	34	35,500.00	1,030.00	35,580.00	6,909.00	10.00	9,910.00	18,751.00	230.00	240.00	200.00	3.00	43,020.00	21,261.00	22,200.50	19,625.00	...	41,825.50	495.30	18,351.73	13,847.03	
Railways	2	17	6	3	28	2,843.76	21.50	2,863.25	...	...	...	563.00	2,302.25	...	...	...	...	800.00	...	1,942.50	...	1,942.50	44.35	...	
Lightning	1	2	3	7	6	6,330.50	6.00	6,339.50	72.00	130.00	4,553.00	1,584.50	105.00	701.00	450.76	532.50	10,126.76	...	10,658.26	116.15	6,400.15	6,616.30
Industrial Operation	9	2	4	1	16	556.00	1,615.75	2,171.75	120.00	215.00	...	1,836.75	...	...	...	64.00	4,284.00	2,602.00	2,859.00	...	16,535.00	18,394.00	238.15	224.33	462.48
Incendiary	1	2	1	5	5	2,904.00	142.00	3,046.00	21.00	20.00	1,762.00	1,243.00	20.00	...	...	340.00	210.00	40.00	3,527.00	...	3,567.00	171.99	428.99	600.98	
Unclassified .....	...																								

FORESTRY

ANNUAL STATEMENT OF FIRES BY CAUSES, MONTHLY DISTRIBUTION, ETC.
WITHIN AND OUTSIDE FOREST RESERVES, CALENDAR YEAR 1948

Cause	MONTHLY DISTRIBUTION											
	Number of Fires				Area							
	A	B	C	D	E	F	G	H	I	J	K	L
Camp-fires	12	8	20	16	55	29.9	71,275.60	14,417.70	19	15	4	2
Smokers	4	7	9	3	23	6,196.00	...	...	8	5	1	2
Settlers	3	12	5	20	10.9	41,835.50	35,580.00	...	...	9	8	1
Railways	2	17	6	3	28	1,912.50	2,865.25	...	...	6	9	2
Lightning	1	1	2	3	7	3.8	10,558.25	6,338.00	...	1	5	1
Industrial Operations	9	2	4	1	16	8.7	18,394.00	2,117.75	1	2	2	2
Incendiary	...	2	2	1	2.7	3,046.00	...	...	3	2	1	1
Public Works	...	...	...	...	...	...	...	...	2	1	...	...
Unlocated	3	7	12	7	29	15.7	34,891.80	36,908.00	...	1	2	...
Unknown	...	...	...	...	...	...	...	...	4	16	1	...
TOTALS	31	47	68	38	184	100	241,976.65	293,216.59	1	1	2	1
Per Cent	16.9	25.5	37	20.6	100				51	1.1	5.27	1.33
									5.5	1.1	5.9	4.31
									1.6	1.1	1.17	1.3
									7.6	1.1	10.9	2.41
									20.23	7.5	29.3	19.2
									75	1.1	10.9	2.41
									160.00	1.1	10.9	2.41
									160.00	1.1	10.9	2.41
									293,980.84	1.1	10.9	2.41
									293,980.84	1.1	10.9	2.41

**SUMMARY SHOWING TOTAL NUMBER OF FIRES AND BURNT
OVER AREAS FROM 1939 to 1948 INCLUSIVE**

Year	Total No. of Fires	Total Acreage	Not Forested	Net Acreage
1939.....	499	429,139.25	159,774.50	269,364.75
1940.....	813	474,244.25	108,597.50	365,646.75
1941.....	445	1,355,424.50	459,475.00	895,949.50
1942.....	215	325,818.75	182,208.25	143,607.50
1943.....	265	515,149.25	409,503.50	105,645.75
1944.....	325	722,658.00	278,186.25	449,471.75
1945.....	284	216,736.50	128,263.50	88,473.00
1946.....	275	272,283.50	179,731.00	92,552.50
1947.....	122	80,060.75	46,894.75	33,166.00
1948.....	184	293,216.59	185,491.00	107,725.59
TOTALS	2,927	4,684,728.34	2,138,125.25	2,551,603.09

**TIMBER CUT UNDER PERMIT, ALBERTA FOREST RESERVES,
FISCAL YEAR 1948-49**

	Bow River	Crowsnest	Clearwater	Brazeau-Athabasca	Cypress Hills	Total
Number of permits	156	26	31	241	454	
Building logs (lineal feet)	20,835	508	2,069	.....	22,912	
Fence posts (pieces)	3,073	80	30	1,290	4,473	
Fence rails (pieces)	7,476	65	12	28,700	36,258	
Fuelwood (cords)	541	152	195 1/2	353	1,241 1/2	
Lumber (ft. B.M.)	62,100	.....	80,000	6,351	148,451	
Mine timbers (lineal feet)	849,077	320,200	37,900	.....	1,207,177	
Poles (lineal feet)	4,950	.....	.....	.....	4,950	
Piling (lineal feet) .....	.....	.....	4,534	.....	4,534	
Railway ties (pieces) .....	.....	.....	1,000	.....	1,000	
Round timbers (lineal feet) .....	.....	.....	.....	12,300	12,300	
Slabs (cords) .....	.....	.....	10	.....	10	

**TIMBER OPERATIONS ON ALBERTA FOREST RESERVES,
FISCAL YEAR 1948-49**

Timber Sales	Bow River	Crowsnest	Clearwater	Brazeau-Athabasca	Totals
Number of active operations	22	13	45	80	
Building logs (lineal feet) .....	.....	.....	836	836	
Fuelwood (cords) .....	.....	2	.....	2	
Lumber (ft. B.M.)	11,496,368	972,644	15,191,941	27,660,954	
Mine timbers (lineal feet)	1,893,435	204,275	1,162,986	3,260,696	
Mine ties (pieces) .....	.....	.....	1,194	1,194	
Poles (pieces) .....	.....	2,205	.....	2,205	
Piling (lineal feet)	14,900	.....	.....	14,900	
Pulpwood (cords) .....	.....	.....	70	70	
Rails (pieces) .....	.....	1,881	.....	1,881	
Railway ties (pieces) .....	.....	11,723	306,698	318,481	
Slabs (cords)	139 1/2	.....	1,184	1,328 1/2	

**TIMBER OPERATIONS ON LANDS OUTSIDE OF FOREST RESERVES
FISCAL YEAR 1948-49**

	EDMONTON	CALGARY	TOTAL
Active operations	445	56	501
Building logs (lineal feet)	74,870	6,788	81,658
Fence posts (pieces)	5,500	13,981	19,481
Fence rails (pieces) .....	.....	11,050	11,050
Fuelwood (cords)	609	66	675
Lath (pieces)	550,450	.....	550,450
Lumber (ft. B.M.)	284,692,174	20,010,511	304,702,685
Mine timbers (lineal feet)	346,665	1,458,663	1,805,328
Poles (lineal feet)	11,675	28,663	40,338
Piling (lineal feet)	1,165	1,433	2,598
Pulpwood (cords)	9,698	.....	9,698
Railway ties (pieces)	1,072,863	154,959	1,227,822
Slabs (cords)	29	30,075	30,104

FORESTRY

27

SPECIAL TIMBER PERMITS

Active operations	461	48	509
Building logs (lineal feet)	4,062	.....	4,062
Fence posts (pieces)	1,232	.....	1,232
Fence rails (pieces)	222	.....	222
Fuelwood (cords)	387	.....	387
Lath (pieces)	115,900	.....	116,900
Lumber (ft. B.M.)	19,321,870	1,344,046	20,665,916
..... timbers (lineal feet)	15,448	255	15,704
Poles (pieces)	1,395	.....	1,395
Piling (lineal feet)	4,156	.....	4,156
Pulpwood (cords)	1,838	.....	1,838
Railway ties (pieces)	93,146	18,480	111,626
Slabs (cords)	15	.....	16
Switch ties (pieces)	4	.....	4
Shingles (pieces)	50,000	.....	50,000

SETTLERS' TIMBER PERMITS

	Edmonton	Calgary	Peace River	Total
Number of permits	1,384	54	1,184	2,632
Building logs (lineal feet)	34,101	8,480	30,376	72,957
Fence posts (pieces)	84,804	7,951	134,996	227,751
Fence rails (pieces)	43,559	2,150	492,150	537,859
Fuelwood (cords)	4,240	310	5,112	9,552
Lumber (ft. B.M.)	5,702,521	156,750	7,314,555	13,173,835
Mine timbers (lineal feet)	191,000	80,500	.....	271,600
Poles (lineal feet)	18,100	6,240	.....	24,340
Piling (lineal feet) .....	.....	.....	320	320
Pulpwood (cords)	3,957	.....	3,802	7,769
Railway ties (pieces)	40	.....	769	809
Roof poles (pieces)	8,400	.....	99,500	107,900
Shingle bolts (cords)	12	.....	16	28
Shingle (pieces)	10,000	.....	.....	10,000
Boxwood (cords)	30	.....	.....	30
Timber Seizures (number)	175	.....	.....	176
Slabs (cords) .....	.....	15	.....	16

GRAZING STATEMENT—ALBERTA FOREST SERVICE, 1948-49

Forest	No. of Permits	No. of Horses	No. of Cattle	No. of Sheep
Cypress Hills	61	155	3,225	.....
Crowsnest-Bow River	281	533	22,814	2,334
Clearwater	74	746	578	.....
Brazeau-Athabasca	95	554	76	1 Goat
TOTALS	511	2,088	25,692	2,334

	Total for the Period, 1931 to 1948-49	Average Per Year
Number of Permits	9,271	488
Number of Horses	54,842	2,886
Number of Cattle	410,019	21,680
Number of Sheep	84,354	4,440

DEPARTMENT OF LANDS AND MINES

SUMMARY OF TIMBER OPERATIONS ON PROVINCIAL LANDS AND ALBERTA FOREST RESERVES—FISCAL YEAR 1948-49

	PROVINCIAL LANDS			FOREST RESERVES			TOTAL
	Timber Berths	Special Permits	Other Permits	Timber Sales	Other Permits	Timber Sales	
Active Operations							
Building logs, (lineal feet)	501	509	2,632	80	4,176	454	
Fence posts, (pieces)	81,658	4,062	72,957	836	22,912	22,912	182,425
Fence rails, (pieces)	19,481	1,232	227,751	.....	4,473	4,473	255,937
Fluewood, (cords)	11,050	222	537,859	1,881	36,255	36,255	587,255
Lath, (pieces)	675	387	9,662	2	1,241 $\frac{1}{2}$	1,241 $\frac{1}{2}$	1,967 $\frac{1}{2}$
Lumber, (ft. B.M.)	550,450	20,665,916	13,173,836	27,660,954	667,350	667,350	366,355,842
Mine timbers, (lineal feet)	304,702,885	20,665,916	15,704	3,280,696	1,207,177	1,207,177	6,560,505
Min. ties, (pieces)	1,805,328	.....	.....	1,194	.....	.....	1,194
Poles, (pieces)	40,338	1,395	24,340	2,205	4,950	4,950	73,228
Piling, (lineal feet)	2,598	4,156	320	14,900	4,634	4,634	26,508
Pulpwood, (cords)	9,698	1,838	7,759	70	19,365	19,365	
Railway ties, (pieces)	1,227,822	111,626	809	318,481	.....	.....	1,659,738
Roof poles, (pieces)	30,104	.....	107,900	1,000	107,900	1,000	107,900
Shabs, (cords) .....	.....	16	15	1,323 $\frac{1}{2}$	10	10	31,458 $\frac{1}{2}$
Shingle bolts, (cords) .....	.....	.....	28	.....	.....	.....	60,000
Shingles, (pieces) .....	.....	50,000	10,000	.....	.....	.....	60,000
Boxwood, (cords) .....	.....	.....	30	.....	.....	.....	30
Switch ties, (pieces) .....	.....	4	.....	.....	.....	.....	30
Round timbers, (lineal feet) .....	.....	.....	.....	.....	12,300	12,300	12,300
Timber Seizures, (number) .....	.....	.....	176	.....	.....	.....	176

IMPROVEMENT STATEMENT
Fiscal Year 1948-49

NEW CONSTRUCTION PROJECTS:

Forest		TOTALS	
Houses	6	14	2
Garages, Sheds, etc.	1	3	1
Fences	4	2	1
Lookout Towers	1	4	1
Water Supply Systems	5	5	2
Barrels and Stables	2	1	1
Telephone Lines (miles)	...	...	1
Corrals	...	...	1
Bridges	...	...	1
Grounds	...	...	1
Trails (miles)	...	...	1
Cabins	...	...	1
Tourists Shelters	...	...	1
Fireguards Roads (miles)	...	...	1
Radio Portables	...	...	1
Miscellaneous	...	...	1

MAINTENANCE PROJECTS:

**IMPROVEMENTS—STATEMENT OF MAN-DAYS WORKED
Fiscal Year 1948-49**

NEW CONSTRUCTION PROJECTS:

Forest		Houses	Buildings, etc.	Structures	Supplies	Water Systems	Telephones	Corralles	Grounds	Trails	Cabins	Shelters	Stoves	Refugees	Portable Tables	Miscell. Lan-eous
Cypress Hills	586	83 1/2	21	33 1/2	12	119 1/2	....	....	35 1/2	....	198	19 1/2	580 1/2	....	82 1/2
Crowsnest	72 1/2	11 1/2	....	....	....	....	....	....	63	....	165 1/2	....	2	....	....
Bow River	50 6 1/2	8	....	....	....	17	....	....	12	....	118 1/2	....	76	....	....
Clearwater	69	....	....	....	12	71	....	....	....	....	2 1/2	19 1/2	23	....	4 1/2
Athabasca	7	21	....	33 1/2	....	31 1/2	....	....	....	....	119	....	....	....	....
Brazeau	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
TOTALS	586	83 1/2	21	33 1/2	12	119 1/2	....	....	35 1/2	....	198	19 1/2	580 1/2	....	82 1/2

MAINTENANCE:

Forest		Houses		Cabins		Sheds and Barns		Stables		Trails		Roads		Fences		Corrals		Water Supply Systems		Lookout Towers and Cabins		Garages, etc.		Grounds		Hilly Meadow Features		Bridges		Miscellaneous		Lanes and Laneous			
Cypress Hills		2		93 1/2		11 1/2		5 1/2		29		31 1/2		110 1/2		17 1/2		21		35		4		30 1/2		12		18 1/2		1 1/2		30 1/2			
Brownnest		4		54 1/2		41		11		3 43		266		37 1/2		272		59 1/2		30 1/2		3		10 1/2		74 1/2		127 1/2		1 1/2		16 1/2		6 1/2	
Cow River		9		21 1/2		14		2 1/2		14		259		153		157 1/2		69 1/2		84 1/2		5		14 1/2		27		100		17		60		1 1/2	
Clearwater		13		65 1/2		4		2 1/2		4		225		142		120		103 1/2		9		34 1/2		5		12 1/2		29		11		12 1/2		4	
Cutha Basca		44 1/2		11		12		2 22 1/2		205 1/2		...		162 1/2		5		5		12 1/2		29		11		12 1/2		11		12 1/2		2			
TOTALS		217 1/2		150 1/2		46 1/2		1,345 1/2		983		903		902		152		90		62		95		335 1/2		170 1/2		60		18		145			

FORESTRY

31

MODE OF TRANSPORTATION AND MILEAGE TRAVELED BY EMPLOYEES OF THE ALBERTA FOREST SERVICE
Fiscal Year 1948-49

Divisions	Foot	Saddle	Driving	Speeder	Canoe	Automobile	Rowboat	Motorboat	Aeroplane	Railway	Others	Total
Northern Alberta Forest District	33,980	24,653	19,639	16,250	332,036	1,598	443	12,098	3,396	19,060	11,953	475,106
Grownest-Bow River Forest	4,867	28,707	3,501	30	120,482	.....	.....	78	.....	3,417	556	161,638
Clearwater Forest	3,464	19,085	1,554	1,238	62,053	.....	.....	166	.....	3,957	1,461	92,938
Brazeau-Athabasca Forest	8,575	7,563	1,632	1,424	71,813	.....	.....	.....	.....	7,077	1,015	99,069
Cypress Hills Forest	1,911	3,254	428	50	12,050	.....	.....	.....	.....	784	230	16,937
Radio	87	381	112	60	6,380	8	.....	.....	.....	3,363	67	10,448
TOTALS	51,164	83,643	26,796	18,992	604,814	1,598	451	12,842	3,396	37,658	15,282	856,136

TREE DISTRIBUTION

The following species and quantities were given out from Oliver Nursery in the spring of 1948:

Transplants:

WHITE SPRUCE (Picea glauca)	11,300
SITKA SPRUCE (Picea sitchensis)	700
LODGEPOLE PINE (Pinus murrayana)	15,500
SCOTCH PINE (Pinus sylvestris)	2,200
RED PINE (Pinus resinosa)	460
WHITE PINE (Pinus strobus)	270
DOUGLAS FIR (Pseudotsuga mucronata)	2,600
AMERICAN ELM (Ulmus americana)	6,000
RED OAK (Quercus rubra)	5,400
BUR OAK (Quercus macrocarpa)	12,000
	56,430

Cuttings:

LAUREL LEAF WILLOW (Salix pentandra)	6,500
GOLDEN WILLOW (Salix vitellina)	2,000
NORTHWEST POPLAR (Populus)	25,000
	32,500

Ornamental Species:

KOSTER BLUE SPRUCE (Picea pungens Kosteri)	124
BIRCH (Betula papyrifera)	2
MOUNTAIN ASH (Sorbus americana)	213
COTONEASTER (Acutifolia)	153
LILACS (Syringa japonica)	11
CEDAR (Thuja plicata)	4
	507

Seedlings:

WHITE SPRUCE (Picea glauca)	2,000
ENGELMANN SPRUCE (Picea Engelmanni)	3,000
LODGEPOLE PINE (Pinus murrayana)	3,000
	8,000

REPORT OF RADIO SUPERINTENDENT, A. EARNSHAW

In reviewing the operations of the Radio Division for the fiscal year 1948-1949 the most outstanding item appears to be the increased length of the lookout season. This is due, in part, to the continuation of the earlier opening date, started last year, and also to the lateness of permanent snow in the fall. The work of opening the towers was commenced April 1st, and the last tower was closed in the latter part of November. It is redundant to state that difficulties were encountered in some of the earlier trips to tower sites, where deep snow conditions were in existence. In some cases, the mileage covered in a day mounted to less than an hour's travel under ordinary conditions. Great credit is due to all personnel concerned in overcoming these difficulties and proceeding with placing the towers in operation in advance of the fire danger period. Such action has proved to be of great value during the spring hazard periods.

Slightly more than the usual turnover in tower personnel was experienced this year, and labor conditions are still such that it is difficult to secure suitable men for lookout tower operations. With a few exceptions, the new men placed on towers this year did excellent work.

A request from the Department of Public Health, Nursing Division, for communication facilities in outlying areas was met by supplying several of their nurses with portable radiophone equipment which had been withdrawn from use in the Forest Service due to its age and condition. These units, permanently installed in the nurses' residences, have proven to be a great help in the administration of this important public service. Several instances could be cited in which the always ready communication facilities at outlying points were instrumental in

saving life or contributing to the health and well-being of sick and injured persons. During periods of complete isolation, insofar as regular means of travel are concerned, the health nurses have still been able to request aid or information, and by so doing have increased tremendously their usefulness to the public they serve.

During the year, the Radio Division found itself responsible for several items of work outside the usual requirements of maintenance. The Forestry Branch secured several new vehicles, both cars and light delivery trucks, necessitating the reinstallation of mobile radio equipment in all new vehicles. In all, five car and eight truck installations were completed during the year. The truck installations were made in a new way by utilizing a space made available by removing the rear window of the cab and installing a metal box to hold the equipment behind the window opening. Electrically and mechanically, this installation was found to be superior to previous ones, and in addition offered a measure of protection to the equipment.

Several hundreds of miles were flown by the writer on several reconnaissances of lookout sites in the Grande Prairie division and three sites were chosen for future ground examination, and later, if suitable, tower installation. This method of initially locating a tower site has proved its value several times, both in the saving of time in the initial survey, the reduction of time required for later ground surveys, and also the ease with which the coverage from the proposed site can be determined.

At the request of the Eastern Rockies Forest Conservation Board, a survey was conducted in and through the Eastern Rockies Forests Area to determine whether F.M. V.H.F. radio could be used to replace the bush telephone communication system at present in use. Some equipment was purchased and some already in use in other parts of the province was used in connection with this survey. Consolidation of the information obtained showed that a satisfactory communication system could be set up in this area despite its mountainous character, and specific recommendations in this connection were made to the board. Upon completion of this survey, a similar series of tests were made in the Banff National Park area at the request of the Park Superintendent. Again, the results of these tests exceeded expectations and a report and recommendation covering a complete communication system were submitted to the Park Superintendent.

Several new items of equipment were purchased and installed this year. A new five-channel Wilcox transmitter, capable of simultaneous dual channel operation was installed in the Edmonton radio station. Authority was received from the Department of Transport to increase the output of this station from one hundred to two hundred watts. From reports received, the new installation and increased power has improved reception at outside points considerably.

Seven war-surplus Wilcox receivers were purchased and converted for use on our main traffic frequency to provide continuous monitor service on both this frequency and the applicable zone frequencies at the headquarters stations. This allows one

or all stations to be called on the same frequency simultaneously and has resulted in a more rapid and efficient service.

The rapid growth of the residential section in the area around the present station has made it unsuitable for further use as a receiver site due to the many electrical appliances in use in the homes. It was therefore found necessary to choose a site to permit the receivers to be remoted to an area of low noise level. Several sites were monitored by means of a portable station, installed in a light delivery, and a satisfactory site was located. A survey of the necessary equipment, telephone lines and power lines will be carried out in order that the installation may be completed as quickly as possible.

The locating of the operating room in the administration building, the remoting of the receivers and dual channel operation of the Wilcox transmitter will allow for a more efficient operation of the radio network and should more than double its traffic handling capacity.

During the year, several submissions were made to the Department regarding the use of aircraft in connection with fire detection and fire suppression. It was pointed out that a Provincial Air Service as such may be used and could be used to advantage in the general business of government administration as practically every government department has use for such a service. A great deal of the writer's own time was used in the gathering of information and the preparing of these submissions.

The fire danger meter which has been prepared by members of the staff of this division under the supervision of the writer was put into use during the fire season on a check basis, to determine whether sufficient data had been available to ensure a reasonable accuracy in making fire hazard estimates. At the end of the fire season curves were plotted which included (a) the fire hazard as determined by forestry personnel, (b) the fire hazard as computed by the meter and (c) the actual fire occurrence. An additional curve was drawn showing the fire danger as estimated by the Wright Tables as compiled by the Dominion Forest Service.

This analysis will be continued for the next two or three years and if necessary correction factors for unusual conditions will be worked out. As yet it is too early to say what degree of accuracy the fire danger meter may be expected to show, but the results over the period under review were very satisfactory. It is unfortunate that weather records for the areas under test are not available prior to the inception of the communication services in 1938.

A SUMMARY OF THE YEAR'S OPERATIONS, 1948-49

LOOKOUT STATIONS—60 Watt and 100 Watt

Station	Engine	Time	Gas	Oil	Messages	Words
	hrs.	min.	gals.	qts.		
Adams Creek	159	50	39 1/2	2	487	7,056
Athabasca	325	00	25	9 1/2	239	3,332
Brazeau	285	28	88	7 3/4	1,246	26,984
Carrot Creek	441	30	119	5 3/4	1,004	22,052
Goose Mountain	329	50	75 1/2	6 1/4	410	5,672
Heart Lake	482	29	83 3/4	2 3/4	374	6,417
Lovett	248	39	60	3 1/2	865	14,100
Mayberne	283	20	63	3 3/4	641	9,405
Puskwaskau	521	38	75	11 1/2	485	8,553
Saskatoon Mountain	856	15	113 1/2	35 3/4	505	7,362
Whitecourt	470	9	119	9 7/8	3,405	68,498
Total	4,404	8	861 1/4	97 7/8	9,661	179,331

HEADQUARTER STATIONS

Calgary	6,764	136,543
Edmonton	11,206	295,308
Edson	2,513	55,755
Grande Prairie	2,966	50,028
Lac La Biche	2,794	69,393
Peace River	2,238	65,069
Rocky Mountain House	1,656	38,918
Slave Lake	983	22,171
Total	30,070	738,485
Grand Total	39,731	912,816

NORTHERN ALBERTA FOREST DISTRICT

Report of Chief Timber Inspector, J. L. Janssen

FOREST PROTECTION

Weather and Fire Hazard

The winter of 1947-48 was cold with heavy snow throughout the Northern Alberta Forest District.

Breton, Edmonton and Edson Divisions

Several heavy snow storms in April and cool weather resulted in a late spring, but spring break-up was rapid, causing general floods. Humidity was fairly high during the spring and summer seasons with a below normal fire hazard. Fall weather after October 1st, however, became very hot and dry creating a short period of above normal hazard in the late fall and the ground went into the winter in a very dry condition. Fire season closed on November 12th by light rain followed by snow.

Whitecourt Division

A late but rapid break-up occurred the first few days of May with an excessive run-off and a normal fire hazard to the 15th of May when the hazard rose rapidly reaching its peak on the 28th when rain brought the hazard to below normal where it remained owing to cool, damp weather until after October 15th, when dry weather and high winds brought a slight hazard during the fall. Snow on November 10th closed the season.

Calling Lake and Lac La Biche Divisions

Spring break-up came late in April with excessive run-off. The weather became hot and dry the first part of May creating an above normal fire hazard until relieved by rain during the middle of July. The weather then turned cooler and some localized summer showers aided in lowering the fire hazard, which returned to fairly normal for the balance of the season, which closed

about the middle of November with a snow storm. The ground went into the winter in a very dry condition.

Slave Lake Division

Unusually warm weather prevailed from the end of April throughout May with a general rain on May 13th. Hot, dry weather prevailed from May 15th to early July creating a rising fire hazard from May 24th throughout June. This was relieved somewhat early in July by scattered showers, but high winds and dry weather created an above normal hazard from July 10th to the first week in November when cold weather and light snow closed the season. At freeze-up the ground was very dry.

Peace River Division

Spring was late with the ice going out of the Peace River on May 1st. From May 15th to mid June the hazard rose gradually to above normal. A few light showers in mid June brought the hazard to normal but hot, dry weather prevailed after this to mid August, causing an above normal hazard. General rains the latter part of August reduced the hazard and cool, dull weather held this to normal until the close of the season on November 6th, by snow. The ground was quite dry at freeze-up on the southern portion of the division.

Grande Prairie Division

Spring was late with slight hazard until the latter part of May when, owing to lack of precipitation over the northern part of the division, the fire hazard rose quite sharply and remained above normal to mid August when relieved by rain. The southern part of the division experienced good moisture conditions throughout with a low fire hazard. Cool, cloudy weather and occasional showers kept the hazard low until mid October when clear, warm weather created a rising hazard to the end of the season in mid November. The ground was quite dry at freeze-up on the northern part of the division.

Fire Prevention

This is attempted, as in the past, by personal contact with the public by the field staff, by warning posters placed at strategic points on forest trails, by showing of films dealing with conservation at schoolhouses occasionally and by the annual tour of the Canadian Forestry Association car. Also by short announcements over the air and an occasional item in the press.

Fire Detection

Detection depends on patrol by the field staff, co-operation by the public and our limited system of lookout towers. Pilots of aircraft have been very co-operative in reporting locations of smokes sighted.

The lookout system functioned very well, to the extent of their limited coverage. The radio system again proved its value in providing rapid communication between the field and supervisory staff.

Fire Suppression

Suppressive action was taken on a total of 153 fires by the Forest Service. The majority of these occurred in the Lac La Biche Division. Practically all of these fires occurred along the

edge of settlements and were man-caused as the season was exceptionally free of fires caused by lightning.

NUMBER AND CLASSIFICATION OF FIRES BY DIVISIONS

Division	Class of Fire				Total
	A	B	C	D	
Calling Lake	1	3	9	3	16
Edmonton	1	1	3	..	5
Lac La Biche	3	14	23	16	56
Slave Lake	1	9	13	4	27
Grande Prairie	3	4	8	6	21
Whitecourt	1	2	3	1	7
Edson	2	..	..	..	2
Breton .....	..	1	2	..	3
Peace River .....	..	4	4	8	16
Total	12	38	65	38	153

AREA AND KIND OF DAMAGE

Total acreage burned over	292,939 acres
Total acreage merchantable timber	47,996 acres
Total acreage cut-over land	9,520 acres
Total acreage young growth	50,144 acres
Total acreage non-forested	185,279 acres
Loss of saw timber	12,640 M F.B.M.
Loss of cordwood	162,290 cords
Estimated value of young growth destroyed	\$131,984.00

ENTOMOLOGY

The field staff again co-operated with the Dominion Forest Service by making sample collections of forest insects to be forwarded to the Insect Laboratory at Kananaskis.

EQUIPMENT

The use of caterpillar tractors, equipped with bulldozer blades, have been proved to be very effective in fire suppression and, in localities where enough water is available, power pumps are very valuable. Unfortunately, in many cases, the shortage of power equipment and the lack of roads and trails, fire suppression has to be carried on by manual labour equipped with shovel and axe.

Authority to purchase a D6 Caterpillar Tractor equipped with dozer was received and the machine ordered but delivery was not obtained until the late spring of 1949.

A quantity of smaller fire fighting equipment was purchased as replacements for worn-out pieces and as additions to our total stock, but we are still woefully under-equipped to meet the exigencies of a bad fire season. The stock of equipment stored on each ranger district should at least be sufficient to equip one hundred fire fighters with an additional twenty per cent of this amount stored at divisional headquarters as reserve. Provision should also be made for a larger reserve stock to be stored at Head Office.

PERSONNEL

Several changes occurred in the field staff this year.

It is regretted that the loss through accidental death of two members of the field staff has to be reported. Inspector Burleigh lost his life by drowning through a boating accident and Ranger Pegg was overcome by monoxide gas when his car stalled in a snowdrift in January, 1949.

The vacancy created by Mr. Burleigh's death was filled by the promotion of Assistant Timber Inspector Smuland and Ranger Titley was promoted to Assistant Inspector in July, 1948.

Ranger Millott of District No. 4 resigned October 9th, 1948, and was replaced by T. W. Farrell on January 27th, 1949.

D. C. McCloy was appointed a ranger in District No. 23 to replace Titley in March, 1949.

Ranger Sherman of District No. 11 retired May 31st, 1948, and was replaced by the promotion of Assistant Ranger McLaughlin, who in turn resigned on September 30th. He was replaced by the appointment of E. W. Bissell to the ranger staff.

Ranger Richardson of District No. 13 resigned for reasons of health on January 20th, 1948, and was replaced by the appointment of J. J. McGrath on February 2nd, 1948. Ranger Hogue of District No. 14 retired on January 14th, 1948, and was replaced by the appointment of Winston Plews.

Ranger Currat transferred to the Athabasca Forest Reserve in the spring and was replaced on District No. 15 by the transfer of Ranger Huppie from District No. 16.

Assistant Ranger Zwiers was promoted to ranger in charge of District No. 16 and Assistant Ranger Roy of the Clearwater Reserve promoted to ranger in charge of District No. 38 following the resignation of Ranger Sykes.

Ranger Weideman was transferred to the Clearwater Forest Reserve and was replaced on District No. 33 by the appointment of T. J. Connors who resigned in February, 1949, leaving the district vacant.

The ranger of District No. 20 was dismissed and replaced by the transfer of Ranger Lambert from District No. 40. Assistant Ranger Kemp of Upper Hay resigned in June and was replaced by the appointment of S. J. Smith in November. R. L. Scott was appointed ranger on District No. 24 West in April to fill the vacancy created in March by the promotion of Ranger Coast. Ranger Scott was transferred to the radio lookout staff early in November, 1948, for reasons of health and was replaced by the appointment of Phil Comeau in the spring of 1949.

All inspectors and rangers attended a very successful ranger meeting which was held in Edmonton from January 25th to 27th, 1949, inclusive. A meeting of all towermen was also held in Edmonton on March 28th and 29th, 1949.

A great deal of benefit is derived from these meetings not only by the field staff but also by the supervisory staff.

IMPROVEMENTS

Breton Division

Barn at Alder Flats Ranger Station: Concrete foundation was installed and logs cut, hauled and peeled.

Edmonton Division

The main construction of the Pembina Cabin was completed, also a three-wire fence around the grounds.

A three-wire fence was also completed around the Cold Creek cabin grounds.

A good wagon road was constructed into the Carrot Creek tower passable in dry weather by cars. Two thousand pieces of corduroy were laid across a floating muskeg and a bridge constructed over Lobstick Creek in connection with this road.

Edson Division

The Nosehill Creek cabin was finished, logs were cut and peeled for the Little Smoky cabin. A trail was blazed from Nosehill Creek cabin to the Athabasca cabin and work started on cutting this trail. Four 4-drawer filing cabinets were constructed. Lumber and shingles for Mayberne tower cabin maintenance, cement and bolts for maintenance of Mayberne tower were freighted to the tower site.

Whitecourt Division

A ranger house was erected at the Whitecourt headquarters. The Whitecourt cache was improved by the addition of a ceiling and a ranger's office partitioned off. A reconnaissance was made to locate the best route for a road to Goose Mountain and a good route located.

The Whitecourt tower road was improved and maintained.

Calling Lake Division

No improvement work was attempted as rangers were busy with fire patrol throughout the season.

Lac La Biche Division

A ranger house and a two-car garage were constructed at divisional headquarters by the Department of Public Works.

A ranger cabin was constructed at Philomena and finishing work on the Gregoire cabin was completed. A barn was erected at this latter site.

A railway flat car was constructed mainly out of salvaged materials. A four-drawer filing cabinet was constructed for the McMurray office. A work bench was constructed for the new garage at headquarters and two ladders were also built for headquarters.

The interior of headquarters office was repainted and metal eavestroughing installed, also the radio aerials were re-arranged.

New wooden porch and steps as well as sidewalks have been built at McMurray headquarters.

The sixteen-foot canoe at headquarters was completely rebuilt, recovered and repainted and a cabin was constructed on the McMurray patrol boat.

A general clean-up consisting of clearing out undergrowth and thinning out trees was carried out on the headquarters grounds.

Slave Lake Division

New Construction: Construction was started on the Goose River and Junction cabin but not completed.

The Crooked River cabin was constructed but not quite finished.

The Willow River pack trail was completed from Sec. 18, Twp. 79, Rge. 26, West of the 4th Mer., to the Howard Lake Trail in Sec. 23, Twp. 76, Rge. 1, West of the 5th Mer.

Material was hauled for construction of a new engine house at Headquarters and an 8'x12' barrel stand erected.

Maintenance: The headquarters speeder shed was completely replaced.

General maintenance was carried out on the Swan Station, Wabasca, McGowan, Ottawau, Slave Lake and East Prairie cabins and grounds.

All telephone lines, approximately 125 miles were maintained.

Maintenance work was carried out on the Inverness wagon road, also on the Deer Mountain, Freeman, House Mountain, Goose River, East Prairie, Howard Lake, North Boundary, Grizzly Mountain, West Prairie and Pelican Mountain Trails.

The Slave Lake headquarters, Slave Lake pasture and Swan station pasture fences were all maintained, also the Wabasca cabin, Swan station and Slave Lake headquarters grounds.

A drainage ditch 100 yards long with a culvert under the north road was constructed at Slave Lake headquarters.

Peace River Division

A cache 16'x16' was constructed near the Upper Hay River Post.

A 35-foot pole lookout ladder was erected on Sec. 10, Twp. 86, Rge. 5, West of the 6th Mer.

A 28-foot flat-bottom skiff was built to replace the old Ft. Vermilion patrol boat.

The Keg River cache was shingled and the ceiling closed in.

The Notikewin cache was moved from Manning to District No. 29 ranger headquarters.

Some improvements were made to the Little Red River cache and a small log stable was constructed at the Keg River ranger headquarters.

Grande Prairie Division

New Construction: A new steel lookout tower was erected at Nose Mountain and a cabin and engine house constructed on this site.

A tool cache 10'x16' was constructed at Calais.

A bulldozed road, approximately 40 miles in length was constructed to give access to the Nose Mountain tower.

Some maintenance work was carried out on existing trails.

TIMBER

Very little slackening, if any, in the demand for timber was noticed and the field staff were again nearly swamped with requests for inspections of various kinds. An endeavour was made to cruise the timber on all new applications and submit a report within a reasonable time, but this was not always possible, also it was hoped that all operations could be inspected at least once during the winter, but even with an increased use of the rangers on this work, it was found impossible. In many cases, of course, while the rangers are assisting with timber work they are perforce neglecting other duties.

The cutting of fire-killed spruce for pulpwood has fallen off and will no doubt soon cease owing to the slackening in demand for this material and the advances in freight rates.

CO-OPERATION

The Royal Canadian Mounted Police again rendered us a great deal of assistance in gathering fire crews and conducting prosecutions. Co-operation by settlers and the general public is

improving steadily and we also received considerable assistance from pilots of aircraft in reporting location of smokes sighted.

GAME AND TRAPPING

A great many patrols were made by the rangers to check on hunting and trapping activities in their districts. The field administration and supervision of more than 2,500 trap lines is handled by the rangers, the taking of applications for beaver permits and, in the northern districts, the issue of these permits is also handled by the field staff. Patrols and investigations in connection with the protection of beaver and of big game took up considerable of the rangers' time, as well as in some areas the trapping of live beaver for removal to a more remote area. An investigation was made on the use of planes by big game hunters in the Edmonton district. The sealing of beaver pelts throughout the Northern Alberta Forest District is also carried out by the rangers and this, especially in the northern districts, entails a great deal of travel in the spring when all trails are at their worst.

PROSECUTIONS

A number of prosecutions were initiated by the field staff and convictions secured in nearly every case.

Prosecutions under The Fires Act	8
Prosecutions under The Game Act	15

SUMMARY AND RECOMMENDATIONS

From the foregoing report it is evident that the field staffs were again overloaded and that an increase in staff is long overdue. We are also in great need of more fire-fighting equipment, both hand and power. The size of ranger districts should be drastically reduced by the establishment of more districts and appointments of new rangers to handle them. The appointment of assistant rangers on practically all districts is recommended, also an increase in the number of assistant inspectors.

As to fire-fighting equipment, it is recommended, that every ranger district be furnished enough hand equipment to outfit at least one hundred men with at least two power pumps on each district.

The purchase of a medium-sized caterpillar tractor equipped with winch and angle-dozer blade, together with a 2½- or 3-ton truck for its transport is recommended for each division, to be used in road building and fire fighting.

The number of pack horses available for use in transporting supplies and equipment to fires, is steadily decreasing and in many cases non-existent. As a remedy to this situation, it is recommended that a light caterpillar tractor and trailer be purchased for each division. The trailer to be equipped with what is known as airplane tires. This would be used mainly for transportation purposes, but also to assist in fire fighting and trail building.

CROWSNEST-BOW RIVER FOREST RESERVE

Report of Forest Superintendent, J. P. Alexander

FOREST PROTECTION

The Forest Reserve staff remained the same as in previous years except that an extra assistant ranger was appointed in each of the following districts: Willow Creek District, Sentinel District, Bighorn District and Aura District.

(a) Fire Season.

In the spring of 1948 temperatures remained cool with snow and odd rain storms quite frequent. Grass growth did not commence until after the middle of May. Due to the inclement weather conditions no spring fire hazard developed.

Summer weather was fair, but slightly cooler than usual for this area. Precipitation was heavier than average and was well distributed throughout most of the summer season. Rains practically ceased after the middle of August and from then until the end of the season the weather became hot and dry. Although these weather conditions existed the soil remained moist and no serious fire hazard developed until about the middle of September.

In the early fall the weather was usually hot and dry as the early snowstorms expected about the middle of September did not materialize. Precipitation throughout the entire fall season was very light. The fire hazard conditions increased and on October 23rd, it was decided to close the Crowsnest and Bow River Forests to all unnecessary travel. This closure remained in effect until November 20th by which time light rain and snow had relieved the situation.

(b) Fire Prevention.

Prevention activities are only applicable to fires originating through human agencies and consist of educating the public by various means of publicity. Posters, radio, lectures, moving pictures and the direct contact of users of the forest by our staff of rangers were used in the work.

The distribution of fire posters and the contacting of the public by our ranger staff, when completing free travel permits, timber permit applications, etc., and while making fish and game patrols, were important methods of fire prevention during the season.

The Canadian Forestry Association, assisted by our ranger staff arranged for and put on free picture shows and talks on forestry and conservation subjects. These shows, which were given in a number of towns in this area, were generally well attended.

Local radio stations were exceptionally co-operative during the past season in broadcasting timely warnings to the travelling public, fishermen and hunters to be careful with fires, cigarette butts and matches while in timbered or heavily grassed areas.

(c) Fire Detection.

Fire detection methods as in previous years depended on the lookout system and field staff patrols. A number of the season's fires were reported by fishermen, hunters or ranchers.

(d) Fire Suppression.

During the 1948 season a total of 15 fires were reported on the Crowsnest-Bow River Forest and immediate vicinity. Eight of these were inside the forest and 7 on adjacent areas. The fires that occurred were small, easily suppressed and did little damage to timber. Total suppression costs for the season amounted to \$758.98 of which \$174.88 covered ranger labour and the balance was spent for wages, food and transportation.

(e) Fire-Fighting Equipment.

The supply of fire-fighting equipment during the past year has been increased by the addition of new fire pumps, trucks, Caterpillar and International tractors with angledozers, and numerous small articles of fire-fighting equipment. These items are now in the process of being distributed to the ranger districts.

PERSONNEL

The following changes in the field staff were made during the year:—

Castlemount District.

Assistant Ranger F. Perry resigned and his position was filled by the appointment of E. M. Bennett. Lookout Man C. L. Gravelle was absent on compensation for most of the season and his position was filled, when necessary, by temporary men.

Crowlodge District.

Assistant Ranger W. R. Liddell resigned in mid-season and his place was taken by G. Plante, transferred from the Aura District.

Livingstone District.

Assistant Ranger S. G. Moore resigned last winter and his position was filled in the spring by the appointment of W. C. Walton.

Willow Creek District.

The new position of assistant ranger on the Willow Creek District was filled by the appointment of A. Campanelli. This man resigned at the end of October and he has not been replaced as yet.

Sentinel District.

Assistant Ranger A. Borton resigned and his position was filled by the transfer of Assistant Ranger J. Elliott from the Aura District. M. Perwiznuik was appointed to the new assistant ranger position in this district.

Bighorn District.

Assistant Ranger M. R. Martin resigned in the spring and his position was filled by the transfer of J. O'Gryzlo from the Kananaskis District. O'Gryzlo resigned during the summer and his place was taken late in the fall by Ben Jarvis, former lookout man on Junction Mountain lookout. The new position of assistant ranger in this district was filled by the appointment of O. C. McGiffen.

Elbow District.

Assistant Ranger W. Balmer was transferred to the Kanan-

askis District and his place was filled by the appointment of G. I. Lambert.

Kananaskis District.

Assistant Ranger J. O'Gryzlo was transferred to the Big-horn District and Assistant Ranger W. Balmer was transferred from the Elbow District to take his place.

Aura District.

Assistant Ranger J. Elliott was transferred to the Sentinel District to replace A. Borton, and his position remained vacant until late fall when it was filled by the appointment of C. M. Sallows. E. M. Cargill was appointed to the new assistant ranger position in this district, but he never commenced duty and the position still remains vacant.

FOREST ADMINISTRATION

Under this heading are considered timber disposal, grazing permits, grazing and miscellaneous uses, such as surface rights, trapper's cabins, roads, etc.

Timber.

Timber sales for the year 1948 totalled 22 and the revenue from these sales amounted to \$45,335.15. Production showed a slight decrease from the previous year. The products from the timber sales are listed below:

Sawn lumber, green	7,335,144	F.B.M.
Sawn lumber, dry	4,161,224	F.B.M.
Mine Props, 5"-7" tops	810,372	Lineal feet
Mine Props, over 7" tops	761,758	Lineal feet
Mine Props, under 5" tops	321,305	Lineal feet
Piling, 8" tops	14,900	Lineal feet
Slabs	139 1/2	Cords

During the year 156 Timber Permits were issued with a total revenue of \$4,093.13. The following material was removed:

Rails, dry, 14" x 3"	4,265	Pieces
Rails, green, 14" x 3"	3,211	Pieces
Fuelwood	541	Cords
Telephone poles, 6" tops	4,950	Lineal feet
Saw and Building Logs, 8" tops	20,335	Lineal feet
Posts, dry, 7" x 5"	100	Pieces
Posts, green, 7" x 5"	2,973	Pieces
Lumber, dry	37,100	F.B.M.
Lumber, green	25,000	F.B.M.
Mine Props, 5"-7" tops	635,957	Lineal feet
Mine Props, under 5" tops	205,120	Lineal feet
Mine Props, over 7" tops	8,000	Lineal feet

Hay.

Two Hay Permits were issued during the year yielding a revenue of \$22.00.

Grazing.

Heavy late winter snowfall and continuing spring rains delayed early forage growth to some extent but eventually resulted in a very abundant growth which carried through the grazing season in spite of protracted warm dry weather in the late summer and fall.

Stock entered the reserve in fair condition, but left at the end of the grazing period in first class shape.

There was some reduction in the number of applications for the year, but still more than could be accommodated, except on the northern divisions which are normally under applied.

For the year a total of 281 Grazing Permits were issued

covering 22,814 cattle, 633 horses and 2,334 sheep. The revenue from this source totalled \$24,924.14.

Losses of stock were reported as small in the Bow River Forest Reserve. In the Crowsnest Reserve losses reported were 143 cattle and horses and 15 sheep. The most severe losses took place in the Castlemount and Livingstone Districts and were largely attributed to bears and wolves.

Uses.

During the season 147 permits were issued covering miscellaneous and grazing uses. These permits cover such uses as trapper's cabins, stock associations, cabins and corrals, drift fences, oil well drilling sites, mineral surface rights, etc. The revenue from this source was \$990.47.

IMPROVEMENTS

New Construction.

During the year, work was proceeded with on 21 projects of which 11 were completed except for a few minor details and the remaining 10 are in various stages of completion. The completed projects were the Bighorn R.S. cottage, Canmore R.S. house, Elbow R.S. house, Elbow R.S. weather station, Canmore R.S. power station, Elbow R.S. power system, Gap weather station, Livingstone Forks bridge, Kananaskis barn, Jumping Pound road and Mill Creek chickenhouse. The incompletely projects were as follows: Aura R.S. bunkhouse, Aura R.S. cottage, Bighorn R.S. bunkhouse, Bighorn R.S. storehouse, Castlemount R.S. cottage, Coleman R.S. storehouse, Crow-Gap road, Gap R.S. bunkhouse, Happy Valley cabin, Livingstone road.

On these projects 1093 man-days were spent at a cost in ranger wages of \$5,773.14 and an expenditure of \$169,497.74 for materials, wages, etc.

Maintenance

Existing improvements were maintained in a satisfactory condition. During the year, 263 projects of various kinds involved 2954½ man-days at a cost in ranger wages of \$14,614.78 and an expenditure of \$1,094.51 for materials, wages, etc.

STATEMENT OF REVENUE COLLECTED

Season of 1948-1949

Timber Sales	\$45,335.15
Timber Permits	4,914.13
Grazing Permits	24,924.14
Hay Permits	22.00
Maps	39.75
Fishing	1,997.12
Game	8,578.75
Grazing uses	161.38
Miscellaneous uses	829.09
Trap lines	500.00
Suspense	69.47
	<hr/>
	\$87,370.98

The mileage covered by the entire staff in the course of their duties throughout the season was as follows:

Mode of Transportation	Miles
Car or truck	120,482
Saddle horse	28,707 ½
Team	3,501
Train	3,417
Boat	78
Foot	4,867 ½
Snowshoes	312
Speeder	30
Tractor	244
	<hr/>
	161,639

CLEARWATER FOREST RESERVE

Report of Forest Superintendent, J. R. H. Hall

FOREST PROTECTION

During 1948-1949 the field staff was at full strength with the exception of a district ranger and assistant ranger for the proposed Saskatchewan District. These positions were not filled on account of uncertainty of location of headquarters and lack of living accommodation.

The assistant superintendent's position was filled by W. J. Bloomberg during June, 1948.

Weather.

Snow melted rapidly during April and at the end of the month with frost out of the ground, the forest floor was well-saturated, and all sloughs and muskegs were filled with water. From the end of April through October there was an abundance of moisture, well-distributed over the period and over all districts. From the middle of October to November 20th, precipitation was very light, west winds prevailed and there was very little frost at night. On November 28th, the first snow storm of the season occurred and at the end of the month, the forest floor was covered with two inches of snow.

Snowfall during the winter months was below normal with an average of twelve to twenty-four inches of snow on the forest floor, December through March.

The Weather Bureau at Rocky Mountain House reports the following precipitation April, 1948, through March, 1949.

April	7.62	November	0.54
May	4.30	December	0.68
June	1.20	January	1.13
July	5.36	February	0.64
August	3.47	March	0.27
September	1.70		
October	0.08		
			26.99 inches

Fire Season.

There was no fire hazard during spring, summer or early fall. From November 1st to November 28th the hazard was high.

Fire Prevention.

All field staff endeavoured to educate school children and the general public in regard to fire prevention by contacts at hunting and fishing camps, lumber camps and visits to towns adjacent to their districts. The Rocky Mountain House newspaper gave co-operation by warning settlers regarding the care of fire when clearing land and fishermen and campers in the care of camp fires.

Fire Detection.

There was no change in the method of fire detection in the forest. Lookout men and the telephone operator were at their posts before the fire season commenced, and went off duty after the forest floor was well covered with snow late in November.

FOREST ADMINISTRATION

Timber.

Timber business was again light owing to cancellation of completed sales, and the fact that few applications were received for new sales.

Below are listed the transactions conducted during the fiscal year:

TIMBER SALES

Number of active operations	13
Number of sales not active	2
Lumber (F.B.M.)	5,244,796
Railway ties (pieces)	16,836
Piling (lineal ft.)	Nil
Mining timber, green (lineal ft.)	465,612
Mining timber, dry (lineal ft.)	233,564
Lagging, dry (lineal ft.)	Nil
Telephone poles (pieces)	2,205
Poles, power line (pieces)	Nil
Rails, dry (pieces)	3,084
Lath	Nil
Corral poles (pieces)	98
Fuelwood (cords)	7
Timber dues collected	\$48,499.43

Seven timber sales were cancelled during the year.

Number of Timber Permits issued	30
Dues on Timber Permits issued	\$1,469.85

Twelve of the above permits were cutting permits.

The following amounts of green and dry timber were authorized to be cut:

Green—	
Fuelwood, spruce and pine (cords)	25
Mine timbers, spruce (lineal ft.)	200
Fence posts, pine	80
Fence rails, pine	65
Building logs, spruce	508
Roof poles, pine	100
Dry—	
Mine timbers, spruce and pine (lineal ft.)	480,000
Fence posts, tamarac (pieces)	1,500
Fuelwood, spruce and pine (cords)	127

Uses.

Oil: Ram River Oils are still drilling their No. 3 well near Prairie Creek in the Clearwater Forest.

Miscellaneous Use Permits: The following new uses were authorized during the period covered by this report:

Brazeau Collieries Ltd.	Haul road	SE $\frac{1}{4}$ of LS 8 of Sec. 22, SW $\frac{1}{4}$ of LS 5 of Sec. 23, N $\frac{1}{2}$ of LS 4 of Sec. 23, E $\frac{1}{2}$ of LS 3 of Sec. 23, All in Township 40, Range 15, West 5th Mer.
M. & E. Corless	Herder's cabin	LS 4 of Sec. 10, Township 31, Range 8, West 5th Mer.
Messrs. H. L. Campbell and W. T. Nance	Railway spur and loading facilities	LS 15 of Sec. 3, LS's 2 and 3 of Sec. 10, Township 41, Range 14, West 5th Mer.
Brazeau Collieries Ltd.	Surface rights	Parts Sec. 22, Township 40, Range 15, West 5th Mer.
Brazeau Collieries Ltd.	Surface rights	Parts Secs. 22 and 23, Township 40, Range 15, West 5th Meridian.
Brazeau Collieries Ltd.	Surface rights	Parts Secs. 11 and 14, Township 40, Range 15, West 5th Meridian.

Grazing.

There was an abundance of feed in all districts, during the spring, summer and fall grazing season.

Snowfall was below normal and stock wintered well.

Stock losses are expected to be light.

The total number of stock grazed during the past twelve months is listed below:

Total number of stock grazed under permit	1,680
Total number of horses grazed under permit	922
Total number of cattle grazed under permit	758
Total number of sheep grazed under permit	Nil
Total number of permittees	79
Average number of stock per permit	21

Collections by months are shown below:

January	Nil	July	132.80
February	Nil	August	39.70
March	284.95	September	82.06
April	Nil	October	70.50
May	\$ 65.00	November	230.73
June	\$152.00	December	323.38
Total			\$1,281.12

IMPROVEMENTS

During the period covered by this report, rangers spent 347½ man-days on new construction work and 1128½ man-days on maintenance work.

Work was carried out on 10 new construction projects:

Storehouses	1	Implement Sheds	1
Barns	2	Machine Sheds	1
Roads	2	Corrals	1
Water Supplies	1		
Blacksmith Shop	1		10

PERSONNEL

All positions were filled during the period with the exception of the district ranger and assistant ranger positions on the proposed Saskatchewan District.

GAME

The below-normal snowfall of 1948-49 winter brought losses of big game animals back to normal after two severe winters when losses were heavy.

Predators increased in Brazeau West and Brazeau East Districts. Due to shortage of rabbits, predators are taking a fairly heavy toll of big game animals.

RECREATION

There was an increase in the number of campers, especially in the Red Deer and Brazeau West Districts.

There was a decided increase in the number of American hunters from September 1st to November 30th.

A total of 931 traveller's permits, covering 2591 persons, was issued.

FISH

A total of 239 seasonal licenses and 44 limited licenses were issued.

TRAVEL

The following mileage was travelled by personnel of the Clearwater Forest during the period under review:

Mode of Transportation	Miles
Car	16,353
Truck	45,700
Speeder	1,238
Train	3,957
Saddle Horse	19,085
Team	1,514
Foot	3,464
Bus	1,447
Boat	166
Snowshoes	14
Total	92,938

BRAZEAU-ATHABASCA RESERVE

Report of Forest Superintendent, D. Buck

FOREST PROTECTION

Personnel.

During the fiscal year ending March 31st, 1949, there were not many changes in the ranger staff but several assistant rangers resigned and others engaged, consequently the authorized staff for this reserve was maintained throughout the year. Two rangers suffered severe accidents requiring hospitalization for some time.

The assistant superintendent was transferred to take charge of the Crow Reserve at the close of the year and has been replaced here by Mr. C. Jackson, who recently graduated in forestry at the University of British Columbia.

The resignation of the assistant clerk at this office made it necessary for a replacement in this position, otherwise there was no change.

Fire Season.

This reserve enjoyed a very favorable fire season, having a total of eight fires reported, which were quickly extinguished; three of these occurred on the Athabasca Reserve and five on the Brazeau Reserve. Of this total, 6 were Class A or less than a quarter of an acre in extent, and the remaining two were Class B. In fact, the total acreage burnt over on the two reserves last year amounted to less than 4 acres; smokers and industrial operations being equally responsible for the highest percentage of these fires.

May and the early part of June are usually considered to be our highest fire hazard period, but this year, due to an exceptional depth of snow at the latter part of the previous winter, and to a very late spring, our fire hazard was below normal until the latter part of June. At no time during the season was it dangerously high. A total of 27 burning permits were issued.

The fire season closed at the middle of October when a fair blanket of snow covered the mountains and foothills, and the timbered area at lower altitudes. Arrangements were then made to bring in the fire lookout men who had occupied these cabins throughout the season.

An improvement in the detection system was effected this season when Luscar and Grave Flats lookouts were supplied with portable radios in addition to their phones, thus providing better communication between towers and with this office.

Fire-Fighting Equipment.

The transfer of the D6 Caterpillar tractor and KB8 International truck from the Crow-Bow Reserve was a valuable addition to our equipment.

All district headquarters have separate caches in which to store fire equipment and although a minimum of tools for the maintenance of this equipment is carried, it is considered sufficient. Each stop-over cabin is equipped with a few essential fire tools in case of emergency. Inspection of the headquarters caches is regularly carried out and when an opportunity arises, the tools at cabins are checked.

The number of miles and methods of travel by the entire staff in the course of their duties for the past year is as follows:

Mode of Transportation	Miles
Auto (including trucks)	71,813
Railway Speeder	1,424
Foot	8,575
Train	7,077
Saddle Horse	7,563
Dog Team	302
Raft	20
Bus	100
Snowshoes	491
Team (horses)	1,602
Tractor	102
 Total	 99,060
 Number of Burning Permits issued	 27

FOREST MANAGEMENT

Under this heading, timber disposal is the most important, since the proper management of timber sales, reduces waste and leaves a residual stand, which not only aids in reproduction by furnishing seed, but is the forerunner to placing our forests on a sustained yield basis. Another object in view, when inspecting timber sale applications, and later the cutting operations, is the prevention of erosion and conservation of water by estimating the amount of timber which may be cut from any one sale.

Uses of land is also included under forest management and is a major item. During the year most of the coal mine companies on the Brazeau Reserve extended their strip mine operations considerably and although the companies are required to make their own surveys, the estimating of timber which will be destroyed and other incidentals rest with the field personnel of this Department.

The following is an itemized statement of revenue collected from all sources during the year under review.

Timber dues	\$100,223.78
Timber sale guarantee deposit	12,472.00
Timber sale application deposit	1,200.00
Timber seizures	956.00
Timber permits	1,100.29
Grazing permits	1,192.80
Hay permits	9.50
Miscellaneous use permits	1,048.27
Fisheries revenue	407.50
Game revenue	5,151.43
Map sales	21.55
Credit suspense	319.85
 Dr. Suspense	 \$124,102.97
	188.60
 Total	 \$123,914.37
 Revenue collected through Head Office, all headings	 \$ 45,609.69
Revenue collected at Edson Office	123,914.37
 Total Revenue Collected	 \$169,524.06

The total revenue collected represents an increase of \$59,669.45, or 54.3% over the previous fiscal year.

The following material was produced from timber sales.

Although 45 permits were issued, 6 sales were inactive for various reasons:

Product	Quantity
Lumber (F.B.M.)	15,191,942
Railway Ties (pieces)	306,698
Mine timbers, green and dry (lineal ft.)	1,162,986
Slabs (cords)	1,184
Building Logs (lineal ft.)	836
Mine Ties (pieces)	1,194
Pulpwood, dry (cords)	70

The following products were manufactured under permits issued:

No. of Permits	Product	Quantity
4	Mining Timbers (lineal ft.)	37,900
4	Building Logs (lineal ft.)	2,069
1	Railway Ties (pieces)	1,000
1	Lumber (F.B.M.)	80,000
15	Fuelwood, dry (cords)	195 1/2
1	Fence Rails (pieces)	12
1	Fence Posts (pieces)	30
1	Slabs (cords)	10
3	Piling (lineal ft.)	4,534
<hr/>		
31		

Total products manufactured from the Brazeau-Athabasca Reserve for the year ending March 31st, 1949, is as follows, including timber sales, permits and seizures:

Lumber (F.B.M.)	15,271,942
Railway ties (pieces)	307,698
Mine timbers, green and dry (lineal feet)	1,200,886
Slabs (cords)	1,194
Building logs, green (lineal ft.)	2,905
Fence rails (pieces)	12
Fence posts (pieces)	30
Pulpwood, dry (cords)	70
Mine ties (pieces)	1,194
Piling (lineal ft.)	4,534

Under miscellaneous uses 119 permits were issued to cover the following different projects.

Project	No. of Permits	Project	No. of Permits
Trapping cabins (86)	40	Stockmen's cabins	2
Surface rights, including mill sites, townsites, strip mines and storage yards	25	Prospectors' cabins	2
Roads	23	Drift fences	1
Telephone lines	2	Power lines	8
Boat houses	2	Schools	2
Fenced pastures	6	Cultivated areas	2
Pipe lines	2	Dams	2
		Total Permits Issued	119

Strip mine operations under authority of Arbitration Board Orders, 9.

Leases, 26.

No commercial grazing is undertaken within this reserve. That is to say, no cattle are grazed for the purpose of fattening for market. Two dairy herds and the individual milk cow makes up the total of 75 cattle covered by permit.

Outfitters account for most of the 604 horses using the reserve. Since the construction of main roads, connecting the mining towns with No. 16 highway, most of the miners have changed their string of from 1 to 6 head of horses for a car.

IMPROVEMENTS

In addition to maintaining existing projects, several major new construction ones were undertaken. A fully modern house was constructed for the ranger at Entrance by the Public Works Department. The reserve field staff constructed a 35-ft. steel tower at Lovett lookout. A 20'x30' bunkhouse at Lovett, con-

structed on surface cement foundation, lumber construction and containing one general room and two bedrooms was completed. Two camp kitchens are under construction for fishermen and hunters using the lower road in the Athabasca Reserve and several other minor building projects which had been commenced the previous year, were finished.

With the use of the tractor and bulldozer recently transferred to this reserve, the Lovett lookout wagon road was graded, and by making a more extended sweep at the steepest part of the road it is now possible to drive a car to the tower with ease. This work was done chiefly in order to permit the hauling by truck of the steel work for the new tower.

The Athabasca lookout was also connected to the lower road by the construction of 3 miles of newly located road, abandoning the old pack trail. This eliminated the old method of packing gasoline and provisions to the lookout by horse.

Two and one-half miles of road were widened out to Winter Creek cabin as there is considerable traffic to this cabin.

One of the major maintenance projects which should be mentioned is the moving of the lower telephone line from the old road to the road recently completed by the Imperial Oil Company Limited, which follows very closely to the forestry road. Since the latter road is a well constructed car road with gravel spread where necessary, it was decided to abandon the old forest road, which was little better than a trail, and move the telephone line over. This practically required the rebuilding of the whole line and at the close of this work in September, 29 miles of the 65 had been completed. In addition to this the rangers have done several miles of preliminary work ahead of the line for the coming season.

TRAPPING AND GAME

The system of allotting trappers reasonably large areas and issuing general permits for the trapping year to cover their cabins has proven to be successful. Last season 81 trapping certificates were issued within the area managed from this office.

As most of these areas are situated in unsurveyed country, and some of our maps are incomplete, some difficulty is encountered in outlining the boundaries of these areas and one is surprised at the attention paid by the trappers to their boundaries when they present their difficulties in this regard to our office.

All fur-bearing animals, especially coyotes and wolves are on the increase, but due to low prices, a small catch was taken. In some favorable areas such as the McLeod River Valley, beaver can be considered quite numerous and also they are now found to have established themselves in the most unexpected places, such as at the heads of creeks in the mountains where willow is their only feed.

A total of 555 beaver seals were issued, but this number includes the Edson Division also.

A trail was made during the spring on the Athabasca Reserve to reduce the number of wolves by the use of coyote getters but due to the lateness of the trial no success was obtained,

however these getters will be set out again later when the summer runs of the wolves have been established.

Big game is undoubtedly decreasing in numbers but not so rapidly as many hunters report. Elk are numerous along the Brazeau River valley and have spread north as far as the Hay River, to my knowledge there are several herds, one in particular of approximately 25 head have located themselves in the vicinity of Rock Lake. Cariboo have been seen in the bush country east of the mountains, especially along the Berland River. Moose and deer have been the hardest hit by the intensive hunting; however a good showing of calves this spring has been reported by rangers.

A checking station has been established at the bridge across the Athabasca River and it is very effective as all hunters entering the Athabasca Reserve by car, must cross this bridge. All hunters entering and leaving the reserve are checked at this point and their kills recorded. Supervision of hunters on the Brazeau Reserve is left to individual rangers with good results.

CYPRESS HILLS FOREST RESERVE

Report of Ranger-in-Charge, R. T. Mackey

FOREST PROTECTION

The winter of 1947-48 was very severe with deep snow and low temperatures. Spring arrived about the middle of April accompanied by frequent rains and sleet storms, the rains continuing until the middle of July. There was sufficient moisture by the middle of July to bring on a heavy growth of grass.

From the middle of July until the second day of November the weather was hot and dry. There was no rain during this period, causing an exceptionally high fire hazard.

Detection and Suppression.

As in previous years, fire detection has depended upon regular patrols and having telephone lines connected to reserve headquarters. The people in the areas adjacent to the reserve are very fire-conscious, making this a very effective means of detection.

Fire Fighting Equipment.

We have one Johnson pump and enough Wajax and tools to equip over one hundred men. A Fordson tractor was purchased to work with our light grader in maintaining the fire-guard roads on this reserve. This is a great improvement as in the past an outfit had to be hired to do this work, and was not always available when needed most.

FOREST ADMINISTRATION

The Cypress Hills Forest, being situated in the centre of a settled district and accessible at all points, requires constant patrolling. At the present time we have not necessary help to do this work, and it is suggested that a patrol man be hired for the summer months.

The mileage and methods of travel by the staff while on duty are listed below:

Mode of Transportation	Miles
Truck	10,718
Saddle Horse	3,254
Team	428
Foot	191
Tractor	230
Train	784
Private Car	1,332
Total	16,987

Timber.

Timber sales were less than last year. This was due to the farmers getting free timber from the clearing of two miles of right of way for the Elkwater-Havre highway.

Timber cut and revenue derived therefrom as follows:

Sawlogs, green spruce (trees)	488
Pine rails (pieces)	10,499
Poplar rails (pieces)	11,678
Sawlogs, green poplar (F.B.M.)	1,700
Willow posts (pieces)	4,648
Fuelwood (cords)	283
Dry pine thinnings (cords)	3
Revenue collected from timber	\$1,920.50

Mature spruce and pine for saw timber is scarce, and it is believed that within the next two years the issuing of permits for this class of timber will have to be discontinued.

Silvics.

All coniferous timber taken out of this forest is done under a system of selective cutting, and a large part of the staff's time is spent in marking timber. While our thinning program leaves a lot to be desired, it is better than cutting to a size, which in most of our timber would amount to clean cutting.

Grazing.

Stock, on entering the reserve, were in poor condition due to the severe winter of 1947-48. However the heavy precipitation of spring and early summer brought on a heavy growth of grass, and all but the poorer quality stock left the reserve in good condition.

The reserve is stocked to capacity and it has been found necessary to turn down applications. Three thousand two hundred and twenty-five head of cattle and 155 head of horses were grazed under permit. From this number of stock there was only a loss of ten head of cattle, four thought to have died of poison weed, one killed by lightning, one known to have been butchered, and four still unaccounted for.

Miscellaneous Uses.

A number of ranchers and farmers adjacent to the reserve rent watering and feeding grounds and also pasture land on the reserve. These uses are held under yearly permit.

Number of permits issued and revenue collected as follows:

	No. of Permits	Revenue Collected
Timber permits	182	\$1,920.50
Grazing permits	61	3,544.75
Miscellaneous use permits	6	20.25
Fur tax and game licenses .....	...	119.20
Totals	249	\$5,604.70

IMPROVEMENTS

As we were unable to hire any men, only two miles of the

telephone line were rebuilt this past year. The remainder of the line was maintained. Two hundred and seventy telephone poles were peeled and treated. A Fordson tractor was received to work with our light grader. All the fire-guards on the west half of the Reserve were worked. Eight hundred fence posts were sharpened and peeled. All fences were maintained and one mile of fence rebuilt, also all buildings were maintained. There were $107\frac{1}{2}$ man-days spent on maintenance at a cost, in ranger labour of \$558.96.

PERSONNEL

There has been no change in personnel since the last report.

GAME

The last two years have seen a large decrease in deer in the Cypress Hills. This was mainly due to the severe winters and the killing of deer by coyotes. The beaver are still increasing and streams are filled to capacity in the reserve. Prairie chicken and ruffed grouse are on the increase, and while not plentiful yet, show a decided gain. A few elk have been seen on the east end of the reserve. These have moved in from Saskatchewan.

RECREATION

There has been an increase in the number of campers and fishermen in the last year, due no doubt to the publicity being given Elkwater Lake Park in the local newspapers.

Fish and Game Administration

Report of the Fish and Game Commissioner, E. S. Huestis

In the annual report for the year 1947-48 special mention was made of the co-operation as between this department and other governmental departments, particularly the Federal Department of Fisheries, the Federal Department of Mines and Resources, the National Parks Administration, and also with the Fish and Game Associations. It would appear from the records that the year 1948-49 surpassed that of the previous year.

Two meetings were held during the year with the Dominion Fisheries, the first one being in May, at which time Dr. J. R. Dymond reported to representatives of the Dominion Fisheries Department and the Fisheries Branches of Alberta, Saskatchewan, Manitoba and Ontario on his investigation of the success of the Fish Inspection Regulations as they applied to the orderly marketing of inland fish to the United States. Dr. Dymond had been chosen to investigate the results of inspection procedure set up some two years previously, by reason of the fact that he was originally the chairman of the committee to investigate the needs of inland fisheries in their attempt to stabilize the production and distribution of inland fish, particularly whitefish, to the American markets. Dr. Dymond's report suggested that certain changes might be made in the Fish Inspection Act and the Regulations to improve the inspection procedure.

The second meeting was held in the city of Ottawa on October 13th at which time certain proposed changes in the Fish Inspection Regulations were discussed together with the proposed new Fish Inspection Act prepared by the Dominion Fisheries Department.

The results of these meetings showed that the province of Alberta had made a very creditable performance in the handling of their export fish to the American market under the Fish Inspection Regulations. During the period from January 1, 1946, to September 15, 1948, there had been only 38,100 pounds of whitefish rejected on shipments coming from the province of Alberta. This was less than one-tenth of the amount rejected from the next nearest province in the matter of rejects on exports to the United States.

Further contact with the Dominion Government was made in the annual Dominion-Provincial Wildlife Conference held in Ottawa on June 3rd and 4th, at which meeting all provinces of Canada and the United States Fish and Wildlife Service were represented. The most important subject under discussion was the migratory bird regulations which are governed by the Migratory Birds Convention Act, a Federal Act. Under these regulations a new approach was made in regard to bag limits and they were set up on the basis of flyways rather than as an overall picture across the Dominion. It was found that certain flyways, particularly in the west, had a greater per capita of

migratory birds than the east, and as a result the bag limits offered to western provinces were slightly higher. The same condition applied in the United States when their bag limits were set up.

Another item of discussion was that of the term "possession" as it applies to the Migratory Bird Regulations. Prior to 1948 the province of Alberta had interpreted "possession" as being possession in the field. In 1948, the Dominion Wildlife Service advised that the interpretation as far as the Department of Justice at Ottawa was concerned, meant possession anywhere. This meant that the hunter, having in his possession in a locker or in his home the number of birds allowed under the possession limit, could not do any further hunting of migratory birds until this number had been reduced.

The matter of damage to farm crops by migratory waterfowl was also dealt with. It was felt by this province that there should be some relaxation in the regulations which gave the farmer a permit to shoot migratory birds at such time as they were damaging his crops. He is usually extremely busy at that time and cannot do the shooting himself. The regulations were therefore relaxed at the request of this province so that the farmer could call in two persons to assist him in protecting his crops.

Another interesting point of discussion was that of the number of days allowed in the shooting season for each province. Some of the provinces allow Sunday shooting, others, including the province of Alberta, do not. It was our feeling in this province that the season limit should be governed by the number of shooting days rather than by the number of calendar days. However, when it came to a vote of the various provinces it was decided that no additional days would be allowed to any province which prohibited shooting on Sunday, this in spite of the fact that where Sunday shooting is allowed, this is the day on which the greatest number of hunters are in the field and the greatest bag of ducks and other migratory waterfowl are taken.

Possibly the most far-reaching decision made at this meeting was that there should be a uniform rule throughout Canada in regard to the control of pump guns and automatic shotguns. It was decided that where such guns were legal in any province they should be plugged to a limit of three shells in the magazine and chamber combined.

The meeting of the Advisory Council on game held on June 15, 1948, was an important one, particularly in view of certain proposed changes in the Migratory Bird Regulations, the possibility of having to reduce the season on big game and also the necessity of deciding on the season which could be allowed on upland birds which were rapidly coming back in their previous numbers.

Some explanation might be given at this time of the make-up of the Advisory Council. There are three representatives of the Department: the Fish and Game Commissioner, the Superintendent of Fisheries and the Superintendent of Game; the University of Alberta is represented by Dr. William Rowan and Dr. R.

B. Miller, both of the Department of Zoology; the Alberta Fish and Game Association has three representatives, namely, Mr. George E. Watt of Calgary, President of the Association, Mr. C. E. Brown of Edmonton, Vice-President, and Mr. K. J. Webb of Turner Valley, also a Vice-President. The farmers of the province are represented by Mr. J. M. Wheatley of Chancellor, while the Indians are very ably represented by Mr. Henry Stelfox of Rocky Mountain House.

A meeting had been held in February to determine the proposed regulations covering big game and these proposals were concluded at the June meeting. In addition, they considered proposed regulations on migratory and upland birds and discussed such subjects as bounties, fees for licenses, and other important aspects of the handling of game administration.

The bi-annual conference with the National Parks Fisheries Administration to discuss the various problems arising out of the propagation and distribution of fish in our streams and lakes was held at Banff on September 20th and 21st. Many problems facing either one or other of the administrations were discussed and a solution found. These meetings with the Parks Fisheries personnel are important due to the fact that we are both dealing with a similar problem in a similar territory.

The close relationship continues as between the Fish and Game administration and the Fish and Game Associations of sportsmen, both in this province and in neighboring provinces. In June a representative of the department attended the annual meeting of the Saskatchewan Fish and Game League at Moose Jaw, and met with the sportsmen and the Fish and Game officials from Saskatchewan to discuss various phases of control of wildlife and fisheries and to get an exchange of views across the inter-provincial boundary. Many of the problems in connection with big game and birds are similar, this being particularly true of the antelope population which lies across the interprovincial boundary between Alberta and Saskatchewan and extending into the State of Montana to the south. It is one herd knowing no political boundaries and must therefore be administered in co-operation with the province of Saskatchewan and the state of Montana.

We received an invitation in June to attend the meeting of the Manitoba Federation of Game and Fish Associations at Clear Lake, but unfortunately the pressure of work did not allow for a representative to be present. However, members of our Alberta Fish and Game Association were in attendance and brought back a report of the discussions.

Many invitations are received throughout the year from local Fish and Game Associations which are affiliated with the Alberta Fish and Game Association. It would be desirable that someone from the department attend all of these local meetings, but when it is considered that there are around seventy locals in the province and each of them holds an annual meeting, this is impossible. It is therefore necessary to meet the sportsmen at their annual provincial meeting, which, in 1948 was held in the city of Calgary on February 4th and 5th.

At this meeting, time was allotted to a report by the Fish and Game Branches of this department and this was very favorably received. It was augmented this year by a list of statistics having to do with the administration of the Fish and Game Branches over a period of years. This gave the sportsmen a bird's-eye picture of information which they are constantly seeking, and saved many questions by letter, telegram and telephone throughout the year.

Before leaving the subject of meetings of sportsmen, a bouquet should be handed to the Calgary Fish and Game Association for their Fishermen's Night held in the spring and their Hunters' Night held each fall. These meetings are so interesting that they attract from 1,800 to 2,000 people, and at many meetings hundreds have to be turned away for lack of accommodation.

The 1948 campaign against crows and magpies carried on each year by the Alberta Fish and Game Association and its affiliated locals was not up to expectations. The sum of \$10,000.00 was made available to the Association to carry on the campaign and during the winter months bounty of 25 cents was paid on goshawks and horned owls and only 571 were taken. During the summer, a campaign on crows and magpies paid a bounty of five cents each. The number taken in this campaign was much smaller than in the two previous years, when 40,333 crows and 68,763 magpies were taken.

The depredations of coyotes are causing increasing alarm amongst farmers and ranchers of the province and is giving considerable concern to this department and to the Department of Agriculture. During the years 1943 to 1948, the Government has paid out \$300,000.00 in bounty at the rate of \$5.00 per animal. In spite of this very large expenditure in bounties, it would appear to have had little effect on the coyote population as a whole.

In the fiscal year 1947-48 bounty was paid on 29,337 coyotes at \$5.00 each for a total expenditure of \$46,185.00. From April 1, 1948, to November 30, 1948, bounty was paid on a further 12,000 coyotes at \$5.00 each, amounting to \$60,000.00. This meant that two-thirds of the entire bounty paid over the six-year period was paid out in one year and eight months. It was finally decided by the Government to discontinue the payment of bounty and this decision was based on several factors. Firstly, the overall population of coyotes did not seem to be reduced to any extent; secondly, bounties were paid on all animals taken whether in settled areas where they menace farmers' stock, or whether they were from the vast unpopulated areas of the north where the coyote is actually a fur bearer with a value on his pelt. During the period in question, the value of the coyote pelt had been reduced so much on the market that the trapper who would normally be interested in taking the coyote for the sake of the value of the pelt, was taking it for the bounty only, plus whatever small amount he could get for the pelt. Thirdly, a study of the bounty system throughout the North American continent was made and it was determined that every administration was of the opinion that the payment of bounty was not a solution to the problem.

The scientific men who make a study of life cycles in animals have advised us that the coyote has not yet reached the peak of its cycle and that it will continue to increase until 1952. In the meantime, it is hoped that the rabbit, the natural food of the coyote, will increase in large numbers so that the coyote will not be looking for livestock to feed on and will remain in the open where he can get sufficient food such as rabbits, gophers, mice and small insects.

The pheasant hatchery at Brooks was again put into operation in the spring of 1948, but through a series of unfortunate occurrences the number of birds liberated was far below that expected and below previous years. These occurrences cut the number of birds liberated to approximately 1,500 and these were distributed in the following areas: Edmonton, Rimbey, Cranford, Magrath, Standard, Castor and Brooks.

The first and principal difficulty encountered at the Brooks pheasant hatchery was the inability of our staff to obtain the necessary 14,000 to 15,000 eggs required to fill our incubator which has a capacity of 12,000. A local misunderstanding arose as between the farmers, their children, the local Fish and Game Association and our staff and we were forced to content ourselves with a collection of 4,602 eggs. When the usual cull of eggs due to infertility and other reasons took place, there were only 4,457 eggs available for hatching.

This was followed by a series of breaks in the electrical power used in running our incubator and brooders, caused by the reconstruction of the power line leading from Calgary to Brooks. Some of the power failures at this time were so long as to allow both eggs and birds to become thoroughly chilled and our mortality rate was extremely high. It was possible to secure an emergency plant to take care of the eggs in the incubator, but the power requirements for twenty-nine brooders were far beyond the capacity of any available plant which could be obtained.

There were few changes in the Game Regulations for 1948 as compared with those in effect in 1947. In the big game section, caribou was closed because of the scarcity of this animal throughout its range in the northwestern part of the eastern slope of the Rocky Mountains. The season on sheep was reduced from the usual two months to one month due to the fact that the population of this animal was considerably reduced in certain areas following two very severe winters in the mountain areas with very deep snow. At the same time, the season on deer, moose and elk was reduced from the usual two months to a period of one and one-half months, this again was due to a reduction in the big game population occasioned by two very severe winters.

The picture in connection with migratory birds, on the other hand, was good and bag limits were raised slightly. In 1947 there was only one zone for the taking of migratory birds and in 1948 it was again decided to divide up the province into zones. Where for many years there had been three zones, north, central and south, a fourth zone was established in 1948 lying

south of highway No. 3 from the British Columbia boundary to Medicine Hat and highway No. 1 from Medicine Hat to the Saskatchewan boundary.

As far as upland birds are concerned, they were still somewhat scarce but it was possible to have a season on Hungarian partridge north of the North Saskatchewan River and highway No. 16 from Edmonton to the Saskatchewan boundary, for a period of three weeks with a bag limit of five per day. It was also possible to have a season on sharp-tailed grouse (prairie chicken), the province being divided into three zones with a bag limit of eight per day in the northern zone north of the North Saskatchewan River and highway No. 16; five per day south of this boundary to highway No. 11 to Red Deer and north of the Red Deer River to Drumheller and thence on highway No. 9 to the Saskatchewan boundary. In the area south of highway No. 11 Nordegg to Red Deer and west of No. 2 highway from Red Deer to the United States boundary, the limit was placed at three per day, and the season reduced to ten days.

Ruffed grouse and blue grouse were given a short season, and in the case of pheasants a three week season was established in the Eastern Irrigation District with a limit of three per day, and in the remainder of the province four separate days of shooting were allowed with a bag limit of three per day. A further season of one week was allowed in the Eastern Irrigation District following the close of the regular season.

The overall picture in connection with game within the province is fairly good. Most of our big game has had a temporary setback but should recover very rapidly. Our migratory birds are on the increase and our upland birds are definitely more numerous; bigger bags and longer seasons should be common in the near future.

GAME BRANCH

Report of Game Superintendent, D. E. Forsland

In rendering this report on the operations of the Game Branch during the fiscal year ending March 31, 1949, it is a pleasure to report a steady progress, not only from the point of revenue collected for the Department, but also, in the improvement of the conditions and distribution of our wildlife. For the past several years there appeared to be a steady decline in the supply of game available to the sportsmen, but the season of 1948-1949 shows a definite uptrend of all wildlife in the Province. This is particularly marked in the supply of game birds, both migratory and upland, and because of this increase in our game bird population it was possible to have an open season on practically all of our upland birds. It is hoped that the low cycle in our upland bird population has passed and that the next few years will see a continuous increase. There is every reason to believe that the supply of birds will still increase for at least another two years.

Big game, which was reported somewhat scarce, particularly in the species of moose, has also shown a definite increase. The

reports received from the Outfitters' Association, the various guides, forestry personnel and the game officers all tend to indicate that big game, with the possible exception of caribou, shows a marked increase in number.

The predatory situation is still reported as being bad, hunters and guides all complain of the prevalence of timber wolves and it has been reported that a considerable toll is taken of moose calves and deer fawns.

There is, however, no doubt that conditions are improving steadily from year to year as more non-resident big game hunters have been frequenting this Province than in years past; and the revenue collected during the fiscal year under review is the largest in the history of the Game Branch.

The review contained under the following headings will afford a clearer and more concise picture of the game situation as it existed in the Province during the fiscal year ending March 31, 1949:—

BIG GAME

As stated at the beginning of this annual report, big game is definitely on the increase, with the possible exception of moose and caribou. From all reports obtained from hunters, outfitters, guides, forestry personnel and game officers there appears to be an increase in Rocky Mountain bighorn sheep and particularly in the supply of mountain goat. For several years the moose has been on the decline whatever the reason may be. There are a number of possible causes which will be dealt with later.

Bighorn Sheep

For several years past the bighorn sheep population in the Province showed a steady decline but from all reports there has been an improvement in this situation as the various hunting parties returning from the sheep areas report a considerable number of young sheep. It is true that the supply of animals, suitable as trophies, is not as plentiful as a few years ago, but there is definitely a great increase in the lamb crop. For a number of years the open season on bighorn sheep has been from the 1st of September until the last day of October. Consideration has been given to reducing the length of the open season on this animal in order to afford better protection and to allow the young lamb crop to grow uninterrupted.

The male bighorn sheep is one of the big game animals which is prized very highly by our non-resident hunters. It is not hunted very extensively by our resident hunters but is hunted mainly as a trophy animal.

Mountain Goat

These animals are definitely on the increase. Reports obtained from most sources of the sheep and goat area would tend to show that the goat population is quite plentiful. This is easily understood, because these animals are not hunted to any great extent by resident hunters but are hunted almost entirely by non-resident hunters as a trophy. Owing to the inaccessible places frequented by these animals they have been able to survive and increase over the years.

Deer

The deer population has shown a steady increase throughout the Province, especially is this true in the foothills region. There is also a definite increase of deer throughout the farming areas further out on the prairies. Reports show that deer is plentiful up and down the Red Deer River valley, the Cypress Hills area and in the area north and east of Edmonton, such as the St. Paul and Vermilion districts. This big game animal has been able to continue increasing in spite of a certain amount of illegal hunting which is being carried on, particularly in the eastern portion of the Province.

The deer which were moved from the area south of Pincher Creek to the district west of Olds a year ago are doing very well. These animals show quite an increase in number; frequenting the farms and more settled areas around Olds they have become quite tame. It would appear that the importation of these deer a year ago has turned out to be quite a success.

Elk

The Province has a large supply of elk, and during the season under review, there has been practically no damage from elk. In previous years the damage to hay stacks and green feed by elk was quite extensive and occasionally elk had to be killed in order to protect the farmers' hay or green feed. In order to control the steady increase of the elk herds in that area lying to the south of the Castle and Oldman Rivers (commonly referred to as the Pincher Creek Area) the hunters were allowed to take either a male or a female animal during the open season, whereas in the remainder of the open areas only male elk was allowed to be taken.

Moose

All reports received in connection with the moose population would tend to show a static situation and none of the reports received at this office would indicate an increase of moose; however, moose will migrate considerably and at the present time these animals are showing up in large numbers in the foothills region from Calgary south to the United States border. In previous years this area contained no moose and it is reasonable to believe that moose have gradually moved to some extent from the heavily hunted areas west of Rocky Mountain House from the Clearwater and Brazeau Forest Reserves to the closed areas in the more southern parts of the Province. It is rather difficult to form an opinion as yet as to what actually has taken place. The consensus of opinion is, however, that the number of moose has increased very slowly, if at all. Most hunting parties returning from their big game hunt in the fall of 1948 reported seeing large numbers of dry cows, but very few bull moose were sighted and very few calves. There seems to be a preponderance of moose cows for some reason or another, this could be caused by the following two conditions:—

Unlike the elk and the deer the moose is not a polygamous big game animal. In the fall of the year, during the breeding season, it is usual to see a family of a bull moose, a cow moose and perhaps a yearling calf travelling together. It is therefore

rather reasonable to believe that the constant shooting of bull moose over a period of years would tend to so reduce the male moose population to cause large numbers of dry cows.

Another possibility and a theory which is advanced by many of the guides is the killing off of the moose calves by the timber wolves thus causing a shortage of calf moose.

Either one or perhaps both of these conditions may be the reason for the unproportionate number of dry moose cows found by the various hunting parties.

Caribou

During the season under review there was an entirely closed season on caribou. The reports received from all available sources were emphatic in their statement that caribou was very scarce. Most of the non-resident hunting parties and outfitters state that there is practically no caribou in that part of the Athabasca Forest Reserve lying to the east of the Smoky River. Apparently the caribou spend their summers in the higher mountains, and around the glacier districts in British Columbia, returning to the Athabasca Forest and lower elevation to feed during the winter, when the district is covered by heavy snow. There is no prospect for an open season on caribou in the near future. Considerably more information must be obtained about this big game animal before it is known what has caused its gradual disappearance from the Athabasca Forest Reserve.

Antelope

In the fall of 1948 a three weeks' open season was declared on antelope in a small area in the south-east portion of the Province, comprising roughly Townships 1 to 7, inclusive, and Ranges 1 to 10, inclusive, West of the Fourth Meridian. The limited open season was declared because of the considerable increase noted in the antelope population during the spring and summer of 1948; a sharp contrast to the very bad year of 1947, when the antelope population was greatly reduced by the very adverse spring.

It is felt by the Department that before a general open season throughout the Province can be declared on antelope, that a more extensive survey should be made dealing with the migration of these animals to, and from, Montana, and Saskatchewan. A well planned survey would give the Department the required information as to the annual migration of these animals and the approximate number of antelope remaining in Alberta during any proposed open season.

Bear

In that area lying south of the Crowsnest-Medicine Hat Branch of the Canadian Pacific Railway grizzly bear is considered a predator and can be shot at any time, by any resident without a license; in the remainder of the Province a license must be obtained to take grizzly bear. The exception in the southern part of the Province is to protect the numerous livestock being kept by ranchers in that area.

Except within the limits of the Rocky Mountains Forest Reserve black bear may be taken at any time and without a license.

MIGRATORY GAME BIRDS

During the spring of 1948 the Province of Alberta experienced a very late spring-breakup, actually this breakup did not occur until the middle of April, when warm weather set in suddenly causing severe flooding conditions and the most unprecedented run-off in years. This late breakup very definitely delayed the northern migration of the waterfowl; however, when the migration finally commenced the birds went north in great numbers. Throughout the summer the water supply remained good, particularly in the deeper and more permanent lakes. Some of the shallow sloughs dried up later in the season, but contained sufficient water during the early summer to allow most of the locally raised ducks to get on the wing and this prevented any perceptible loss from drought. In the fall, during the open season on migratory birds; i.e., in the latter part of September and the month of October, the supply of migratory birds was very plentiful.

Accepting the opinion of the technical and administrative personnel of the Dominion Wildlife Service, the United States Wildlife Service and Ducks Unlimited, as well as our own game personnel, it was learned that there was a very decided increase in the migratory bird population throughout the Western Provinces, particularly in the northern portion of Alberta. With the very definite increase of migratory birds the complaints about crop damage caused by ducks also became numerous. The district known as the Eastern Irrigation District was particularly affected by ducks which destroyed some of the irrigated crops, such as small fruits, peas and other garden produce. Later in the season the Dominion Wildlife Service issued a blanket permit to cover the Eastern Irrigation District, allowing farmers to shoot ducks causing destruction to their crops.

In other parts of the Province special permits were issued to complainants in the usual way after investigations had been made either by Game Officers or the Royal Canadian Mounted Police as to the severity of the damage.

UPLAND GAME BIRDS

All the species of upland game birds have shown a remarkable recovery, particularly is this the case in the sharp-tailed grouse and the Hungarian partridge. During the summer of 1948 many favorable reports were received indicating that the migratory birds were definitely on the increase in numbers. In view of these favorable reports the Department allowed an open season on the sharp-tailed grouse, ruffed grouse, Hungarian partridge and ring-neck cock pheasant during a portion of the months of September and October. There is every indication that for the next two or three seasons these birds will show a steady increase before again declining in numbers.

ALBERTA FUR PRODUCTION

During the trapping season 1948-1949 Alberta trappers produced 2,639,971 pelts of various kinds. This is 671,674 more pelts than the number of pelts taken during the previous year. It is apparent from our statistics that the fur production in this

Province is gradually increasing year by year. It is regrettable however, that in spite of the increase of more than one-half million pelts taken over the preceding year that the returns to the trappers were reduced by \$855,207.00 over last season. The total amount of money received by the trappers for their labour during the past year was \$1,926,783.50. This drop, in the amount of money received by the trappers, was the result of the slump in the fur market in the spring of 1949.

It would perhaps be appropriate to make some comment on the raw fur trade as it existed in the spring of the season under review. It can be readily seen by comparing the value of the various furs sold by the trappers this year and the value of the furs sold by trappers during the season 1947-1948 that there is a tremendous reduction in the prices obtained. Take as an example wild mink which this year brought an average price of \$22.00 per skin and which a year ago brought \$28.62 per skin; squirrels sold at \$0.25 per pelt average as compared with \$0.69 average during the season 1947-1948. Take our beaver for example, the average price during the season under review was \$19.00 as against \$31.80 per pelt the year previous. Also muskrat prices were down exactly \$1.00 per pelt average. The spring of 1948 was particularly difficult for the fur trade, as it appeared that the traders were unable to find a market for the furs purchased from the various trappers during the winter. The manufacturers, who are the buyers of the furs produced in the Province, appeared reluctant to purchase a new stock of raw fur owing to the uncertainty of the fur market. Many of these conditions combine to reduce the profits made by the trappers from their trapping operations.

REGISTERED TRAPLINES

During the fiscal year the Department issued 2,905 Certificates of Registration of Traplines. This is an increase of 66 trapline registrations over the previous season and is the greatest number of registered traplines issued in any year since the Province commenced the registration of traplines. The Game Act states that registered traplines must be renewed not later than the 15th day of July prior to the trapping season and owing to many trappers neglecting to comply with this section of The Game Act it became necessary to increase the registration fee to \$20.00 as on and from September 1st in order to avoid a congestion of complications in the office of the Game Branch, which would undoubtedly be the case if trappers were allowed to submit their applications on or about the opening dates of the trapping season.

PREDATORY CONTROL

Magpies and crows are noticeably decreased in numbers throughout the Province. The Alberta Fish and Game Association again carried out a program of payment of bounty for crows' and magpies' feet and it is hoped that these pests will eventually be brought under some sort of control.

Bounty was paid on timber wolves and cougar killed during the period April 1, 1948 to March 31, 1949, in the amount of

\$15.00 for timber wolves killed from April 1st to September 30th, and \$12.00 per timber wolf killed during the remainder of the year. The bounty on cougar was \$15.00 on any cougar taken throughout the year.

Bounty was also paid on coyotes killed during the period April 1st to November 30th, 1948, at \$5.00 per coyote. However, the bounty on coyotes was discontinued as on and from December 1, 1948, as it was considered that the payment of bounty on coyotes was not a remedy to the problem of coyote depredation.

GAME PRESERVES AND BIRD SANCTUARIES

During the fiscal year ending March 31, 1949, the Province did not establish any new game preserves or bird sanctuaries.

ENFORCEMENT

It is noticeable that over a period of years the number of convictions obtained under The Game Act and the Game Regulations remains to a great extent constant, not only does the number of convictions fluctuate only slightly but it is found that many of the persons convicted of game infractions are habitual repeaters; i.e., it is found that they have been convicted at some previous date for an infraction of the Game Act. During the fiscal year ending March 31, 1948, the Game Branch obtained 235 convictions for various kinds of infractions of The Game Act and Game Regulations. This is a decrease of seven convictions from the previous year when 242 convictions were obtained.

In connection with these convictions there is a great variety of articles confiscated to the Crown, such as illegal furs, guns, ammunition, traps, snares and other equipment including automobiles, trucks, boats and outboard motors. All firearms and ammunition are turned over to the Attorney General's Department for disposal. Other articles, such as confiscated furs, traps, etc., are disposed of by Public Auction and the proceeds from such sale form part of the general revenue of the Province.

In enforcing the Game Act and Game Regulations the Department has at all times been given wonderful cooperation and assistance by the Royal Canadian Mounted Police, and we wish to take this opportunity to acknowledge this very valuable cooperation. Our game officers are always assured of a very courteous reception and very valuable assistance whenever they call at any detachment of the Royal Canadian Mounted Police in connection with their work.

In our game law enforcement work the game officers are constantly up against a very definite obstacle "lack of public cooperation." Many times there is someone who has full knowledge of an infraction of The Game Act having been committed, but he feels that it is none of his business and that it is merely a matter for the game officers or the members of the Royal Canadian Mounted Police to ferret out the offender and bring him to justice. The unfortunate part of this indifferent attitude lies in the fact, that those hunters who strive to obey our Game Laws are not giving their friends, the game officers, the assistance and help which they deserve. Too many hunters refuse to

report infractions even though such illegal hunting and poaching of fur is spoiling the sport for others.

The territory allotted to each game officer is exceedingly large and it is, of course, impossible for him to be everywhere in his district at once. Apart from their regular duties of apprehending persons who commit infractions of The Game Act our game officers have many other duties to perform of a purely administrative type. They have to check on the wildlife population and submit reports from time to time; kill predators, such as coyotes, cougar and wolves; live-trap beaver where these animals are causing damage to farm crops and other property; supervise and assist in the moving of deer and various types of big game from one part of the Province to another when it is found expedient that such moving of big game animals must be performed; help protect farmers' and ranchers' crops from depredations, not only of ducks and geese, but from the depredations of elk and deer. Further, game officers must be on hand to sell various licenses, such as big game licenses, game bird licenses, fishing licenses as well as issue permits for the export of big game trophies and furs, collect fur tax, compile maps of traplines as well as taking affidavits in connection with the payment of the various bounties, such as cougar and timber wolf bounty and many other such duties too numerous to mention. As can be seen from the above, our game officers are busy men and any assistance which the public can render them would make their work somewhat easier and more effective. It must be obvious that we cannot have wildlife conservation without adequate game law enforcement, the one being dependent on the other and both are part of our efforts to preserve for posterity some of the wildlife that we have with us today.

SUMMARY

In conclusion, the past year has been very successful from practically every point of view; not only from the point of revenue but also from the standpoint of conserving our natural resources of fur and game.

As can be seen from the attached statistics there has been a steady increase in the number of pelts of furbearing animals taken by our trappers even though the amount of money realized is somewhat less than in the year previous. The Department has, of course, no control of the price realized by our trappers, because such price is more or less set by the world fur market and like any other commodity is governed by the supply and demand to some extent; however, the gratifying aspect of our trapping operations is that the trapper and the fur buyer both have the assurance that there will be a supply of fur for the trapper to take and for the fur trade to purchase. This, after all, is the most important feature of our conservation program.

The sale of big game and game bird licenses has also shown a tremendous increase and the total revenue to the Province this year has reached an all-time high in the amount of \$338,120.16, exceeding last year's revenue by \$51,000.58.

GAME LAW VIOLATIONS

(For the period April 1, 1948 to March 31, 1949)

Name	Address	Nature of Offence
Alotte, Robert, Heinsburg, Selling muskrat without having pelts stamped.		
Anderson, Allan, Tofield, Hunting ducks without game bird license.		
Anderson, Lawrence, Tofield, Hunting ducks without game bird license; and using unplugged shotgun; shotgun confiscated.		
Applegarth, Joe, Hobbema, Hunting muskrats illegally.		
Applegarth, Jonas, Hobbema, Hunting muskrats illegally.		
Archibald, Charles M., Rosalind, Unlawfully hunting deer.		
Armstrong, W. L., Berry Creek, Unlawfully in possession of beaver pelts.		
Aulotte, R., Heinsburg, Selling muskrats without a license.		
Badger, Adam, Clarkson Valley, Unlawful possession of big game.		
Beauchamp, Malcolm, Peace River, Unlawfully killing deer.		
Beaudette, Eugene, Beauvalon, Unlawfully shooting muskrats.		
Bellamy, J. W., Edmonton, Hunting game birds without a license.		
Bilan, Joe, Ross Creek, Unlawfully in possession of muskrat pelts.		
Bilosar, Walter, Drumheller, Hunting on private lands.		
Birkinshaw, Roy, Berry Creek, Unlawfully in possession of beaver pelts.		
Bitango, Mike, Lethbridge, Shooting pheasants illegally.		
Boisjoli, Ovide, Fort Saskatchewan, Hunting on Sunday.		
Bolt, Frank, Hobbema, Unlawfully in possession of muskrat pelts; and failing to keep proper records of pelts purchased and sold.		
Bouchier, Adam, Fort McKay, Unlawfully in possession of furs.		
Bourassa, Bruno, Lac La Biche, Illegal possession of moose.		
Bourke, James Leo, Fitzgerald, Trapping muskrats during closed season.		
Bridarolli, Silvio, Lethbridge, Hunting game birds without a license.		
Bridgett, K. J., Nanton, Unlawfully hunting game birds.		
Britton, Earl, Edmonton, Hunting game birds without a license.		
Buchkowski, Stephen, Quigley, Buying fur without a fur dealer's license.		
Buffalo, Sam, Hobbema, Unlawfully trapping muskrats.		
Caine, Wallen, Edmonton, Removing evidence of sex from game.		
Caldwell, Bud, Cardston, Unlawfully hunting game birds.		
Campbell, M. D., Elnora, Unlawfully trafficking in muskrats.		
Campio, Julius, Driftpile, Unlawfully in possession of squirrel pelts.		
Cardinal, Archie, Slave Lake, Possession of illegal squirrel pelts.		
Cardinal, Phillip, Slave Lake, Possession of illegal squirrel pelts.		
Cardinal, K., Moose Portage, Unlawfully hunting and trapping.		
Carlson, Victor, Winfield, Illegal possession of game.		
Carter, Sidney, Grande Centre, Hunting game birds during closed season.		
Champagne, Frank, Peace River, Trapping without a license.		
Charles, Edgar, Clear Hills, Hunting fur-bearing animals without a license.		
Chase, Ruben L., Last Lake, Hunting big game without proper clothing; and hunting big game out of season.		
Christie, Jack, Chauvin, Shooting ruffed grouse.		
Chrusch, Wm., Richmond Park, Unlawfully hunting squirrels on trapline.		
Church, Herbert, Trout Lake, Illegal possession of muskrat pelts.		
Clark, G. H., Nordegg, Allowing his guide to act as a guide for more than one (3) person; allowing another party to carry his Guide's License; allowing another party to carry his Outfitter's License.		
Coburn, Allan, Vermilion, Unlawfully killing deer.		
Cody, Bernie, East Coulee, Unlawfully hunting ducks.		
Coldwell, Bud, Cardson, Unlawfully hunting game birds.		
Congdon, Lloyd, Duhamel, Shipping mink pelts out of Province without required export permit.		
Courtoreille, Alex, Faust, Hunting big game without a license.		
Colvin, T. T., Edmonton, Hunting ducks on Sunday.		
Darwish, Charles, High Prairie, Buying fur without fur dealer's license.		
DeCaluwe, Hubert, Stirling, Unlawfully shooting pheasants.		
Decoine, Clement, Fitzgerald, Trapping beaver during closed season.		
DeCosta, Thomas, Drumheller, Hunting on private lands.		
Deitz, Casper, Big Valley, In possession of illegal muskrats.		
Delaney, Archibald A., Bezanson, Unlawfully in possession of big game meat.		
Denninger, C., Marlboro, Unlawfully in possession of big game meat.		
Dennis, Edward V., Okotoks, Hunting game birds in closed season.		
Doucette, Jack, East Coulee, Hunting game birds in closed season.		
Dubitz, Tom., Shalaka, Illegal possession of squirrel pelts.		
Ducharme, Tommy, Keg River, Illegal possession of 12 beaver pelts.		
Ducket, Edwin, Hinton, Unlawfully shooting squirrels.		
Dureau, Hilaire, Edmonton, Hunting migratory birds without license.		
Eddy, Charles, Brownvale, (2) Hunting big game without cap and coat of scarlet material; hunting big game during closed season.		
Egger, Gerald, Calgary, Hunting over private lands.		
Elliott, John Devere, Sundre, Killing cow moose.		
Ertman, Ervin, Millet, Trapping muskrats without a permit.		
Essington, Thurlow, Alliance, Unlawfully hunting fur-bearing animals.		
Ford, Thomas H., Edmonton, Unlawfully hunting migratory game birds.		
Geddes, Clinton V., Prince George, British Columbia, Hunting game birds with an automatic.		
Giroux, Maxim, Slave Lake, (2) Shooting beaver with rim-fire cartridge; also shooting muskrats.		
Giza, Joseph, Blairmore, Illegal possession of big game.		
Giza, Steven, Blairmore, Illegal possession of big game.		
Giza, Tony, Blairmore, Illegal possession of big game.		
Goodwin, Irvin, Hythe, Trapping muskrats without required special permit.		
Graf, Ernest, Crossfield, (3) Carry another person's guide's license; carry another person's outfitters' license; unlawfully guiding more than one person at a time.		

Gregor, Rudolph, Heinsburg, Purchasing unsealed muskrat pelts.
 Grimm, George, Notikewin, (2) Failing to render fur dealer's returns; purchasing fur at premises other than that shown on license.
 Gurski, Matwil, Noral, Trapping without required permit.
 Gyori, Louis, Rimley, Unlawfully hunting game birds.
 Hall, Harold A., Killam, Shooting migratory birds on Sunday.
 Hambling, Eric, Lac La Nonne, Illegal trapping of muskrats.
 Hamelin, Henry, Peace River, Illegal possession of big game.
 Harris, Jack, East Coulee, Unlawfully hunting migratory birds.
 Hirose, Harry, Taber, Hunting without license.
 Hoefling, Eddie, Forestberg, Impersonating a Game Officer.
 Holden, Richard, Medicine Hat, Hunting game without license.
 Holowaychuk, Metro, Ispas, In possession of illegally trapped muskrats.
 Houle, Joseph, Desmarais, In possession of illegal muskrat pelts.
 Hudson, Otto, Slave Lake, In possession of illegal beaver and muskrat pelts.
 James, William, Rumsey, Illegal possession of big game.
 Jamha, Samuel, Edmonton, (2) Unlawfully purchasing muskrat pelts from trappers; purchasing various kinds of fur from trappers instead of from licensed dealers.
 Jensen, Glen, Taber, Hunting without license.
 Jensen, Sejer, Wayne, Illegal possession of game birds.
 Jerick, Frank, Redcliff, (2) Hunting game birds without a license; hunting game birds in restricted area.
 Karick, Jos., Edberg, Illegal possession of muskrat pelts.
 Kaszas, David, Drumheller, Hunting on private land.
 Kehoe, Charles, Calgary, Shooting Hungarian partridge during closed season.
 Kiester, David E., Provo, Utah, U.S.A., Shooting pheasants out of season.
 Kinasewich, John F., Rodef, Carrying a loaded fire-arm in an automobile.
 Kjeldsen, J. H., Millicent, Unlawfully shooting pheasants.
 Klemmensen, Harry, Standard, Unlawfully killing female moose.
 Koproski, John, Boyne Lake, In possession of illegal beaver pelts.
 Krossa, Henry, Rimley, Hunting game birds with a rifle.
 Krutco, John, Faust, Unlawfully hunting squirrels.
 Kunkell, Jos. C., Rosemary, Exporting furs without export permit.
 Langton, Harvey, Killam, Shooting migratory birds on Sunday.
 Laver, H. W. Delburne, (2) Unlawfully trafficking in skins of fur-bearing animals; and while being a fur dealer, buying illegal skins.
 Lawlor, Henry, Edmonton, Alleged shooting of game birds.
 Lealand, Donald T., Sugden, Allowing skins of muskrats to be destroyed.
 Leffler, F. O., Wildwood, Illegally trapping muskrats.
 Lemaigne, Stone, Cheechem, (2) Illegal possession of muskrat pelts; assaulting a peace officer.
 Leskiw, J. F., Spedden, Unlawfully in possession of muskrat pelts.
 Letendre, Solomon, Wabamun, Unlawfully shooting game birds.
 Lewis, Leslie G., Travers, Hunting game birds during the closed season.
 Liebergall, George, Bellevue, Hunting within a game preserve.
 Linklater, Leonard, Burnham, Sask., Hunting without a license.
 Lockwood, Charles, Wildwood, Illegally trapping muskrats.
 Low, Byron, Taber, Unlawfully hunting game birds.
 Maas, Ralph, Lea Park, Unlawfully shooting muskrats.
 Maroney, Patrick J., Calgary, Hunting over private lands.
 May, R. F., Calgary, Unlawfully shooting pheasants.
 Meinechuk, Nicholas, Lacombe, Shooting Hungarian partridge.
 Miron, Cyril, Lethbridge, Hunting in a game preserve.
 Mitty, Nick, Hemaruka, Unlawfully hunting geese.
 Monson, Frank, Edmonton, (2) Removing sex organs from carcass of big game; failing to attach seals to carcass of big game.
 Murray, Alexander, Bonnyville, In possession of pelts of fur-bearing animals without required license.
 Murray, Roy, Grande Prairie, Hunting game birds during closed season.
 Myles, James, Medicine Hat, Hunting ducks without having shotgun plugged.
 Mackenzie-Greves, George, Innisfail, Shooting moose illegally.
 Macleod, A. H., Red Deer, Hunting ducks illegally.
 McDonald, F., Maycroft, Shooting deer illegally.
 McGarry, John, Frog Lake, Shooting prairie chicken illegally.
 McGarry, John, Medicine Hat, Hunting big game in restricted area.
 McKenzie, Alexander, Rocky Mountain House, Illegally in possession of beaver pelts.
 McKenzie, Don, Rocky Mountain House, Illegally in possession of beaver pelts.
 McLeod, J. R., Alliance, Hunting ducks during closed season.
 Murphy, Harold, Last Lake, Bartering flesh of moose.
 Noskey, Paul, Reno, Unlawfully killing big game.
 Nunnemacher, Owen, Brooks, Hunting birds during closed season.
 Omesoo, Pierre, Hobema, Unlawfully trapping muskrats.
 Omesoo, William, Hobema, Unlawfully trapping muskrats.
 Oslie, Mrs. Muriel, Three Creeks, In possession of illegal squirrel pelts.
 Peppe, Harry, Edmonton, Hunting migratory birds with pump gun not properly plugged.
 Patterson, H. D., Kananaskis Valley, Impersonating a game officer.
 Pederson, Victor, Killam, Shooting migratory birds on Sunday.
 Peterson, Gus, Chip Lake, (2) Trapping fur-bearing animals during closed season; and unlawfully setting snares.
 Philhofer, Stephen, Claresholm, Unlawfully in possession of deer.
 Plamondon, Luceine, Edson, Illegal possession of moose meat.
 Plummer, Lawrence, Manning, Illegal possession of flesh of big game.
 Plummer, Russell, Manning, Illegal possession of flesh of big game.
 Podesta, Jos., Redcliffe, Hunting pheasants during closed season.
 Powder, Joseph, Slave Lake, (2) Shooting beaver with rim-fire cartridge; and shooting muskrats.
 Prins, John, Barnwell, Unlawfully shooting muskrats.
 Prushko, Leon, Smoky Lake, Shooting game birds out of season.
 Pytlarz, John, Coleman, Illegal possession of moose meat.

Raisbeck, Wm., East Coulee, Shooting game birds out of season.
Rankin, M. C., Twin Butte, Making false affidavits.
Rehn, William, Chip Lake, Unlawfully trapping muskrats.
Reierson, Nels, Deer Hill, Shipping mink out of Province without export permit.
Richard, Dave, Normandeau, Purchasing fur illegally.
Roder, William, Mannville, Unlawful possession of ducks.
Runte, Henry C., Edmonton, Unlawfully hunting ducks.
Schickerowski, Norman, Bashaw, Unlawfully hunting deer.
Schieble, Oswald, Veteran, (3) Unlawfully killing deer; In possession of illegal deer meat; hunting big game on Sunday.
Schischikowsky, Louis M., Gage, Shooting prairie chicken during closed season.
Schultz, Brenton, Bashaw, Illegal possession of parts of big game animals.
Schultz, Glenn A., Bashaw, Unlawful possession of deer meat.
Schultz, Peter F., Bashaw, Illegal possession of flesh of big game.
Secord, Walter S., Benton, (2) Hunting game birds without a license; hunting game birds on Sunday.
Semeniuk, Metro F., Smoky Lake, Shooting game birds out of season.
Shagory Trading Co., Fort Fitzgerald, Shipping fur without required export permit.
Shelest, John, Noral, Illegally trapping muskrats.
Sheplawy, John, Lacombe, (4) Unlawfully hunting big game; in possession of snared coyote pelt; in possession of illegal deer meat; unlawfully trafficking in flesh of big game.
Shipel, F., Hinton, Unlawfully shooting squirrels.
Sickoff, Frank W., Bellevue, Hunting in a game preserve.
Simpson, John, Edmonton, Shooting game birds during closed season.
Sinclair, Wesley R., Claresholm, Unlawfully shooting deer.
Smart, Murray, Calgary, Unlawfully hunting migratory game birds.
Snow, Earl H., Lethbridge, Unlawfully shooting game birds.
Soifer, H., Edmonton, (2) Failing to keep proper records of furs purchased and sold; obtaining permit by false statement.
Sontag, Charles, Notikewin, Trapping squirrels without a license.
Speer, B. H., Calgary, Unlawfully shooting pheasants.
Stone, Percy, Lethbridge, Unlawfully shooting Hungarian partridge.
Swampy, Magnus, Hobbeema, Unlawfully trapping muskrats.
Sweeney, T. L., Grovedale, Selling illegal pelts of fur-bearing animals.
Tamura, Mac, Rosemary, Carrying loaded fire-arm in vehicle.
Tamura, York, Rosemary, Carrying a loaded fire-arm in an automobile.
Telford, Tippy, Leduc, Alleged illegal muskrat trapping (no conviction).
Tharou, Anthony, Bentley, Unlawfully hunting ducks.
Thompson, James F., Rumsey, Illegally in possession of parts of big game.
Toma, John, McRae, Illegal possession of squirrel pelts.
Townsley, Wm., Edmonton, Unlawfully hunting ducks.
Tridel, Joe, Edmonton, Hunting migratory birds with pump gun.
Turner, John, Peterborough, Ontario, Carrying a loaded shotgun in an automobile.
Vair, Norman, Medicine Hat, Hunting game without a license.
Vance, E. F., Slave Lake, Trafficking in fur without a license.
Van Dyke, M. L., Tofield, Unlawfully allowing moose meat to spoil.
Vetsch, Ed., Rimbey, Unlawfully hunting game birds.
Voight, Albert, Vega, Destroying sex of big game animal.
Waite, W., Sr., MacKay, Unlawfully hunting fur-bearing animals.
Waite, Walter C., Jr., MacKay, Unlawfully hunting fur-bearing animals.
Wald, Frank, Last Lake, Obtaining by barter the flesh of moose.
Walker, Robert, Driftline, Hunting big game without a license.
Ward, David, Dunvegan, Trapping fur-bearing animals without a license.
Wells, J., Horburg, Unlawfully in possession of parts of big game.
Werner, Wm. W., Lacombe, Unlawfully in possession of parts of big game.
Whitehead, Paul, Three Creeks, Illegal possession of flesh of big game animals.
Whitehouse, W. J., Mannville, Hunting ducks during closed season.
Whitford, Lloyd, Canyon Creek, Shooting squirrels without required license.
Wilkins, Arthur, Drumheller, Illegally in possession of flesh of big game.
Willoughby, Charles P., Edmonton, Hunting big game without a license.
Wilson, Clarence, Vermilion, Illegal possession of wild ducks.
Wing, Delmer Rocky Mountain House, Trapping fur-bearing animals illegally.
Woods, Harry, Nevis, (2) Unlawfully in possession of snared coyote; and unlawfully in possession of snares.
Yagos, Jos., Coleman, Illegal possession of moose meat.
Yanik, Steven, Edmonton, Hunting with unplugged shotgun.
Yee, Kimmie, Rocky Mountain House, Unauthorized possession of big game.
Youshock, Peter, Illegal possession of moose meat.
Ziniewicz, A., Glendon, Unlawfully buying pelts of fur-bearing animals.

DEPARTMENT OF LANDS AND MINES

GAME LICENSES—PERIOD APRIL 1st, to MARCH 31st, 1949

	Number of Licenses	Fee	Total Amount
Residents' Bird Game Licenses	27,352	\$ 2.50	\$68,880.00
Non-Residents' (Canadian) Bird Game	318	5.00	1,590.00
Non-Residents' (Non-Canadian) Bird Game	378	25.00	9,450.00
Residents' Deer Seals	11,782	2.00	23,564.00
Residents' Moose Seals	8,118	2.00	16,236.00
Residents' Elk Seals	6,722	2.00	13,444.00
Residents' Sheep Seals	421	2.00	842.00
Residents' Goat Seals	233	2.00	466.00
Non-Residents' Deer Seals	79	35.00	2,765.00
Non-Residents' Moose Seals	113	50.00	5,650.00
Non-Residents' Elk Seals	98	50.00	4,900.00
Non-Residents' Sheep Seals	78	50.00	3,900.00
Non-Residents' Goat Seals	107	50.00	5,350.00
Permit to Collect	26	Free	
Taxidermists' Licenses	6	5.00	30.00
Residents' Special	87	5.00	435.00
Non-Residents' Special	83	50.00	4,150.00
Guides' Special	164	2.50	
Guides' Licenses	2	1.00	412.00
Game Farms	1	5.00	5.00
Outfitters'	61	Various	1,625.00
Non-Residents' Permit to Export	118	Free	
Non-Residents' Permit to Export	30	Various	919.25
Fur Farmers'	22	Various	185.00
Permit to Trap Muskrats	3,190	3.00	9,570.00

BOUNTY ON TIMBER WOLVES, COYOTES AND COUGARS—SEASON 1948-49

TIMBER WOLVES AND COUGARS—Killed from April 1, 1948 to March 31, 1949	
352 Timber Wolves at \$15.00 each	\$ 5,280.00
498 Timber Wolves at \$12.00 each	\$ 5,976.00
50 Cougars at \$15.00 each	750.00
<hr/>	
	\$12,006.00

COYOTES—Killer from April 1, 1948 to November 30, 1948

12,316 Coyotes at \$5.00 each	\$61,570.00
<hr/>	
Total amount paid in bounty	\$73,576.00

LICENSED ALBERTA FUR FARMS

Beaver	13
Muskrats and Beaver	3
Muskrats	6

CONVICTIONS UNDER THE GAME ACT, 1948-49

Number of Convictions	235
-----------------------	-----

CONFISCATED FURS

Amount realized from the sale of confiscated fur during the period April 1st, 1948 to March 31st, 1949	\$2,660.23
--	------------

TRAP-LINE REGISTRATIONS

Number of Registered Trap-Lines and Revenue, April 1st, 1948 to March 31st, 1949	2,905	\$30,170.00
--	-------	-------------

FUR DEALERS' LICENSES, ETC.

Resident Fur Dealers' Licenses to carry on business in a city and elsewhere than in a city	395	\$ 3,950.00
Non-Resident Fur Dealers' Licenses to carry on business in the Province	3	\$ 250.00
Resident Travelling Fur Purchasing Agents' Licenses	24	\$ 600.00
Tanners' Licenses	2	\$ 20.00
Furriers' Licenses	18	\$ 180.00

FUR TAX REVENUE

Amount Collected	\$126,421.68
------------------	--------------

MUSKRAT AND BEAVER PERMITS ISSUED

Muskrat Permits Issued	439
Muskats Reported Taken	37,173
Beaver Permits Issued	437
Beaver Reported Taken	1,956

BIG GAME ANIMALS KILLED BY NON-RESIDENT HUNTERS

Grizzly Bear	14
Black Bear	22
Deer	34
Elk	36
Moose	68
Mountain Goat	79
Mountain Sheep	48
Antelope	Nil

ALBERTA FUR PRODUCTION—SEASON 1948-49
(WILD FUR)

	Total Number Of Pelts	Average Value Of Pelts \$	Total Value Of Pelts \$
Badger	73	1.78	129.94
Beaver	10,380	19.00	197,220.00
Ermine	181,934	1.60	291,094.40
Fisher	1,020	28.62	29,192.40
Red Fox	530	1.75	927.50
Blue Fox	6	18.00	108.00
White Fox	20	6.50	130.00
Lynx	231	7.50	1,732.50
Marten	332	22.00	7,304.00
Mink	6,587	22.00	144,914.00
Muskrat	558,907	1.38	771,291.66
Otter	102	18.00	1,836.00
Jack Rabbit	7,439	.55	4,091.45
Skunk	2,303	.80	1,842.40
Squirrel	1,864,547	.25	466,136.75
Coyote	2,926	2.50	7,315.00
Timber Wolf	43	4.00	172.00
Wolverine	13	7.50	97.50
Silver Fox	84	9.50	798.00
Cross Fox	180	2.50	450.00
Bush Rabbits	2,814	.....	.....
			\$1,926,783.50

FISHERIES

Report of the Superintendent of Fisheries, H. B. Watkins

A review of the fiscal year ending March 31st, 1949, confirms a trend indicated in the last annual report for this division in respect to the commercial fish production for Alberta. The year's total catch of commercial fish amounted to 7,222,901 pounds compared with 9,896,547 pounds for the previous year. This decrease of 2,673,646 pounds is mainly made up by the tullibee take which dropped 2,175,717 pounds by reason of a less intensive fishing effort by fishermen supplying the fur farm industry. Supplies of other varieties of feed for fur farmers together with a decline in the number of fur farmers has eased the demand for tullibee to some extent but the available supply of tullibee is not sufficient to meet the requirements at all seasons of the year. Costs of production and haulage charges make the overall cost of tullibee from any outlying lake prohibitive to many fur farmers, and, consequently a number of lakes which have heretofore supplemented the supply were not fished extensively. Lac La Biche, normally a large producer of tullibee, was not fished during the year, pending recovery from the severe winter kill referred to in the last annual report. The decrease in production was less in whitefish, a mere 16,813 pounds, than in other species. Pickerel fell away from the previous year's catch by 129,199 pounds, pike 142,242 pounds and perch by 154,130 pounds. These figures are representative of a reduced fishing effort on the part of the industry rather than the potential availability of fish. Lower prices to the producer had the effect of curtailing fishing for the coarse varieties and a number of fishermen and operators were attracted to the newly established fishery at Great Slave Lake in the Northwest Territories and gave less time and effort to the smaller producing lakes in the Province.

The market has shown a leveling off during the last two years and values were considerably lower on all varieties through-

out most of the year. The large production of fish from Great Slave Lake has had its effect on the market, and although the demand has been good, the shippers could not at all times find outlets in the fresh fish markets, and a large quantity of whitefish, in particular, were placed in cold storage at Chicago and other U.S.A. points. The industry in Alberta is fast approaching a critical period due to the competition of the new fishery at Great Slave Lake whose operators, for the most part, have had the foresight to appreciate the need for a quality product to compete successfully in the export markets. Present methods of handling, processing and packing of fish by the Alberta industry fall short of standards set by other producers of perishable foods. The lack of improvement in the handling of fish throughout the years is, perhaps, caused by the peculiar character of the industry itself and the men engaged in the fish business or the men chosen by the exporters to represent them in the field. Very few of these men have had proper experience in the handling or packing of fish, and their object has been to obtain as large a quantity of fish as possible, regardless of quality. The men work on a commission basis for fish bought, hence, the less expense in packing, grading and culling of poor quality fish, the greater their profit. Quality is the key by which markets will be opened and maintained and the industry must, of necessity, take heed and present a quality product to the home and export markets.

In line with a smaller production of fish for the year exports likewise show a decrease. Exports total 1,449,989 pounds of which 1,003,047 pounds were shipped to Chicago, Ill., U.S.A., and the remainder to New York and other U.S.A. centres and Canadian markets. A fact worthy of note and of particular encouragement is the increased consumption of whitefish in Alberta. Home use of Alberta whitefish increased 89 per cent over the previous year which represents a total of 630,539 pounds. With greatly improved and enlarged handling and storage facilities it is not unlikely that Alberta could, in the future, consume its total whitefish production. However, whitefish exports for the year were 1,129,277 pounds or 304,380 pounds less than the previous year's total. Exports of pickerel were down 215,112 pounds, while perch and pike showed a decrease of 96,025 pounds and 63,522 pounds respectively.

The number of licenses issued to commercial fishermen numbered 3,215, being 492 less than the previous year. This is accounted for by the smaller fishing effort already referred to in this report, the closure of Lac La Biche and fewer fishermen in the outlying areas of the province where low prices and high costs made many fishing ventures hazardous and uneconomic. The market value of fish for the year was \$636,396.01, reflecting a decrease of \$220,100.05. Domestic fishing for home consumption showed no significant change, an increase of only 11 licenses over last year. The sum of \$16,776.31 was collected for royalties on fish as compared with the previous year's \$19,571.70.

No exceptional change is noted in the number of prosecutions and confiscations. This year's prosecutions were 76 and confiscations 70, as compared with the previous report of 83 and 63 respectively.

In this report, attention has been drawn to the necessity for an improved quality product. The responsibility for any improvement rests not only upon the industry itself but also upon the governments concerned. The quality of the inland fisheries product is of national concern because of its reflection on the reputation of all Canadian fish products both in the domestic and export markets. Inspection for quality of whitefish has been developed in recent years and it is understood that the Department of Fisheries (Dominion) intends to extend nationally its quality control program and include other species of fresh water fishes. Inspection is not only a screening device for removing unsuitable fish but also serves to improve the general quality through education of the industry. Administratively, certain responsibilities fall upon provincial or federal authorities. Administration of lakes and control of marketing within provincial boundaries, development of lake management programmes and lake surveys, are a provincial concern. On the other hand, inspection for interprovincial or international export is a federal responsibility.

SPECIAL RESEARCH PROJECTS

Under the direction of Dr. R. B. Miller of the University of Alberta, special research projects currently being carried on are:—

- (a) Efficiency of natural spawning in whitefish.
- (b) *Triaenophorus* control. This embraces several distinct projects which are all being currently pursued, viz:
 - (1) Reduction of pike by rotenone poisoning (Square Lake).
 - (2) Reduction of tullibee by overfishing.
 - (3) Poisoning the free-living larval tapeworms (laboratory research at University of Alberta).
- (c) Management of whitefish lakes.
- (d) Taxonomy and life history of native cutthroat trout.
- (e) Recognition, habits and life history of the rainbow-cutthroat hybrid.

SURVEYS

Surveys of provincial waters have been conducted more or less regularly since 1941. To date, many of the important lakes have been covered and a good start has been made on the river systems. It is hoped to eventually cover, at least in a preliminary way, all the waters of the Province. A summary of the investigations made during the year and the recommendations which suggest themselves from the data obtained are included herein, but, details of the investigations are omitted for the sake of brevity.

McLeod River.—A brief survey of the McLeod River and its tributaries was made between Mountain Park and Peers. Some of the streams were given only brief study; a few entering the west loop of the McLeod were not seen. Sufficient information was gained, however, to evaluate the drainage as a whole. In addition, a visit was made to Obed Lake and Creek and a few tributaries of the Lobstick River.

In general, the McLeod streams fall into two categories; upper, clear streams, with fairly swift currents and rock beds; and lower, brown streams, with slow flow and mainly mud banks and bottoms. The tributaries of the west loop (Mill, McPherson, White) are somewhat intermediate between these two extremes. The Lobstick River and Obed Creek belong to the slow, brown category. The lower streams are Arctic grayling streams and support good breeding populations of this species. The grayling, however, do not grow very rapidly, due to low food supply. The poor food is probably due to flooding which causes silting and leads to low water over winter, with anchor-ice formation. The introduced rainbow do poorly and aggravate the low food condition by competing with the Arctic grayling.

The clear, upper streams were without native trout population. The introduced rainbow has flourished and spread, but fails to achieve appreciable growth. Specimens of legal length are seven years or more old and weigh only a few ounces. This is due to the very cold water and poor food supply.

Three broad recommendations are made:

(1) Plant no fish of any kind in the lower streams. A preliminary survey suggested attempting to establish brown trout in the lower streams. The present information shows these waters are too cold and too low in food for brown trout. If brook trout do well in the upper streams, two kinds of fishing should be available Arctic grayling and brook trout.

(2) Plant eastern brook trout in the clear upper streams.

(3) Remove legal restrictions on length of rainbow trout to be retained by anglers. The restrictions should be left in force from Sundance Creek and downstream.

Dogpound Creek.—This creek consists of about 65 miles of water, beginning north of Cochrane and running north into the Little Red Deer River. The upper half, ending at Beaverdam Creek, was the only portion examined. Of this half, the uppermost 15 miles are the most important, the water is clean, but distinctly brownish; the beaver ponds are often murky with a transparency of only two or three feet. Maximum water temperatures were found to be 60-65°F. Although large numbers of bottom animals are present, they are small forms, and the total volume per square foot was only 0.8 cc. In the beaverdams a rich fauna of water bugs and diving beetles exists. This portion of the stream supports a good population of eastern brook and brown trout. Downstream, at the bridge east of Cremona, the water is about fifty feet wide, shallow, rocky and open. Temperatures here are some 10 degrees higher, possibly beyond the normal range for trout. Many dace and suckers are present here. The upper Dogpound is a warm, moderately rich stream, with plentiful deep quiet beaver ponds, ideal for brown trout.

Wolf Creek (tributary to North Saskatchewan River). This stream was examined principally in the vicinity of Alder Flats. It is a slow, very brown stream and flows about 35 miles to enter the North Saskatchewan River. Beaverdams are numerous, resulting in deep, almost stagnant, very dark ponds. The

water was several degrees over air temperature at the time of survey and in normal summer weather this stream undoubtedly warms well over 70°F. Food supply is good but predominantly of warm-water animals. It appears that whereas Wolf Creek looks like ideal brown trout water, it probably becomes too warm for trout.

Horseshoe Creek, a tributary of Wolf Creek, is a small very brown creek, covered with brush and dead-fall; the current is slow with a bottom of mud. Appears to be too small for serious consideration.

Tongue and Bull Creeks (Highwood River tributaries). Tongue Creek consists of approximately 28 water miles of gentle stream which rises in the foothills and empties into the Highwood north of High River. It has an average gradient of 36 feet per mile and most of the drop occurs in the upper half. Four miles below its source it is about 12 feet wide, shallow, rocky, with rocks covered with slime and algae, flow very gentle, becoming muddy after fifteen minutes of light rain. The bottom food is poor, of small mayfly nymphs, caddis larvae and blackfly larvae. Tongue Creek appears too warm, dirty, and in the lower reaches, too polluted to be a trout stream.

Bull Creek consists of about 7.5 miles of water entering the Highwood River just west of Longview. It is a fairly cool stream (60°F), 2 to 3 feet wide, with a brisk flow, gradient of 80 feet per mile. It is very shallow, often just a trickle, and too small to be of interest as a trout stream.

Battle and Grayburn Creeks (Cypress Hills). These streams were revisited for the purpose of obtaining specimens of rainbow trout. Both creeks were thickly settled by beavers, and their dams form a continuous chain of ponds, deep, brown and fairly still. They contain common suckers, as well as rainbow trout. Ten rainbow trout were examined; the three-year-olds averaged 14.2 inches, 17½ ounces, a good growth and compares favorably with growth in Obed Lake. The range of ages indicates that the population is spawning, and that there is a natural reproduction. While these streams are supporting a rainbow population, the slow, quiet, brown water suggests that brown trout would do better.

Willow Creek Drainage. A preliminary examination of parts of the Willow Creek drainage was made during the year. The parts of the drainage examined—North Fork, South Fork, Chaffen, Westrup, Trout and Lyndon Creeks—flow through fairly level country, with a thick, rich topsoil. These streams form a sharp contrast to the Bow River streams, which flow through mountainous country with very little topsoil. The Willow Creek streams are, as a result, much richer in food supply, and grow many more trout, much more rapidly. These beautiful trout streams are, however, subject to sheet erosion whenever and wherever the topsoil is denuded of vegetation. This leads to rapid silt deposition and eradication of bottom life. A careful watch should be kept on such things as cattle-salting localities, overgrazing and stream-side trails.

Muskeg Creek (Elbow River Tributary). The lower mile of Muskeg Creek was examined, and, unlike the Elbow River, the water is distinctly brown and the bottom rubble covered with silt. At the mouth the creek is 30 feet wide, shallow, stony and flows at about 1.4 miles per hour. The stream is liberally grown with willow and spruce, which provide an effective cover. A bottom sample in a riffle yielded only 0.2 cc. per square foot—a very small food supply. Cutthroat trout were very small, one to three ounces, and were in their second and third summers. This poor growth is to be expected in a stream with such a poor food supply.

Conjuring Lake. This lake has an area of approximately 540 acres, lies in township 48, range 26, west of the 4th Meridian, 4½ miles long and only a few hundred yards wide, lying in a narrow valley. It is well protected from prevailing winds, the shore line is provided with reed patches and, at each end, grow dense beds of *Meriophyllum*, *Potamogetons* and yellow pond lillies. The maximum depth is 37 feet and most of the lake is over 20 feet deep. The shores slope steeply into the deep water. The plankton is rather poor, the bottom fauna only fair, and the fish small for their ages. It seems unlikely that it will support a large fish population, or stand up very well under angling pressure. Perch, pike, common suckers and spot-tail minnows were examined. These latter were heavily infested with the larvae of the tape-worm, *Schistocephalus*. Conjuring Lake is definitely limited in productivity by the stagnation conditions in its deeper waters and possibly by the rocky nature of the bottom.

Battle Lake. Lies in Township 45, Range 2, West of the 5th Meridian; has an area of approximately 1½ square miles. Like Conjuring Lake, it lies in a long, narrow valley, about five miles long and from 600 to 800 yards wide. A maximum depth of 44 feet was found in the centre of the northwest end. Most of the lake is from 29 to 40 feet deep, the shores sloping steeply to the water. Battle Lake is a victim of its morphology; its shape prevents the proper wind-action needed to aerate its waters. The resultant stagnation seems to have doomed the lake to rather low productivity. Fish will doubtless always be available, but not likely in great quantities. Whitefish, burbot (ling), pike and the common sucker were examined. No manner of effecting an improvement suggests itself.

Buck Lake. This is an attractive body of water, about 12 square miles in area, lying in rolling, wooded country, in Township 46, Range 6, West of the 5th Meridian. The shore line is mainly muddy, but a few sandy beaches occur. The deepest water found was 39 feet, the central area of the lake being mostly over 30 feet deep. The shores slope fairly gradually into the deep water. The bottom is largely of rich black mud, with a rocky bottom found in the bay on the east shore. Seine hauls around the shore revealed an enormous population of perch, burbot, pike, spot-tail minnow and five-spined sticklebacks. Whitefish and pickerel are also abundant in the lake. The growth of whitefish is remarkably good and the annual production is very large for the size of the lake.

Buck Lake is a small, shallow eutrophic lake, exceptionally productive in all aspects. The bottom fauna and plankton are unusually rich, and fish production, both in quantity and variety, is remarkable. The enormous production in the lake is building up its bottom at an accelerated rate. The abundant plant growth is drawing on oxygen reserves in winter. When the lake has become only a little shallower it is not unlikely that winter-kills will be frequent and the fish production fall off.

WATER STABILIZATION

Of considerable importance to this division has been the programme for stabilization of lake levels instituted by the co-operative efforts of Ducks Unlimited, the Water Resources Branch and this department. For a number of years grave concern has been felt over the declining water levels of a number of our northern lakes and the damage to the fishery accruing through exposed or shallow spawning grounds, oxygen depletion and winter-kill of fish. Dams of a suitable type were constructed during the year at Utikuma Lake, Calling Lake, Fawcett Lake and Lac La Nonne. In addition to these, other dams were constructed, but no mention is made of them here since their relative importance to fishery management is small.

DISTRIBUTION OF FISH

A total of 841,817 trout and perch were distributed to various streams and lakes throughout the year. Of the different species, 61,020 cutthroat were planted in the Bow River and Oldman River watersheds; the drainages of Waterton River and Oldman River received 90,407 rainbow trout; Loch Leven trout to the number of 54,150 were stocked in the river systems of the Clearwater, Red Deer and North Saskatchewan; 249,440 speckled trout were planted in tributaries to the Bow River, McLeod River, Clearwater River, Red Deer River and the waters of Cold Lake. Nineteen lakes were stocked with perch to the extent of 351,800 yearling or adult fish. A detailed statement giving particulars of the various plantings is included in this report.

Angling in trout waters is becoming more popular year by year. Seasonal angling permits issued numbered 11,832 and limited permits 1,151. This is representative of an increase since 1944 of 88 percent and 224 percent respectively. Although angling pressure in some sections is intense and consistent throughout the season, it has been gratifying to note that creel returns have for the most part been satisfactory. Angling for what is commonly known as the coarse varieties of fish, such as pike, pickerel and perch, has also shown a marked increase; and it is estimated by observers that we have at least 20,000 residents who enjoy this sport, free of charge.

FISHERIES
1948-49

REVENUE:

	1947-48	1948-49
Fishing Licenses	\$19,257.00	\$16,763.00
Fish Dealer's Licenses	2,535.00	2,560.00
Boat Licenses	165.00	135.00
Angling Permits	23,897.99	24,603.60
Royalties	19,571.70	16,776.31
Casual	1,306.78	642.96
	<u>\$66,733.47</u>	<u>\$61,480.87</u>
Decrease \$5,252.60		

Licenses and Permits	14,875	16,418
Prosecutions	83	76
Confiscations	63	70
Commercial Fish Catch (Lbs.)	9,894,272	7,222,901

PROSECUTIONS:

Fishing without license	12	16
Excess of per diem limit .....	...	...
Fishing out of season	11	4
Using illegal gear	3	10
Pollution .....	...	2
Using fire-arms illegally	4	4
Illegal possession of fish	14	12
Illegal sale of fish	3	10
Illegal transportation of fish .....	...	1
Using gill net in stream .....	...	6
Operating illegal nets	25	3
Operating nets without markings	1	...
Operating nets other than licensee .....	...	...
Operating nets in closed area	7	8
Obstructing a fishery officer in line of duty	3	...
	<u>83</u>	<u>76</u>

COMMERCIAL PRODUCTION OF FISH

Species	1944-45 Lbs.	1945-46 Lbs.	1946-47 Lbs.	1947-48 Lbs.	1948-49 Lbs.
Whitefish	2,655,016	3,253,621	2,649,881	1,776,629	1,759,816
Trout	21,492	79,860	111,878	21,372	3,463
Pike	430,150	657,837	585,146	702,239	559,797
Pickerel	994,659	846,083	612,466	388,243	259,044
Perch	152,643	205,047	244,957	200,685	46,555
Tullibee	3,319,306	3,374,524	6,688,432	6,514,847	4,339,130
Mixed Fish	<u>152,105</u>	<u>167,033</u>	<u>179,838</u>	<u>292,532</u>	<u>255,096</u>
Totals	<u>7,725,371</u>	<u>8,584,005</u>	<u>11,072,598</u>	<u>9,896,547</u>	<u>7,222,901</u>

	Weight Lbs.	Value to Fishermen	Value as Marketed
Totals for year 1944-45	7,725,371	\$418,653.49	\$ 863,138.28
Totals for year 1945-46	8,584,005	742,098.48	1,451,717.14
Totals for year 1946-47	11,072,598	600,292.43	1,340,539.95
Totals for year 1947-48	9,896,547	449,155.56	856,496.06
Totals for year 1948-49	7,222,901	374,991.88	636,396.01

LICENSES AND PERMITS

	1944-45	1945-46	1946-47	1947-48	1948-49
Angling Permits (Season)	6,296	6,503	9,038	10,099	11,832
Angling Permits (Limited)	355	427	629	848	1,151
Domestic Licenses	417	479	87	89	100
Fisherman's Licenses	3,323	4,700	4,643	3,603	3,088
Commercial Licenses	142	173	130	104	127
Fish Dealer's Licenses .....	...	...	82	105	97
Motor Boat Licenses	4	6	17	27	23
Totals	<u>10,539</u>	<u>12,288</u>	<u>14,707</u>	<u>14,875</u>	<u>16,418</u>

DEPARTMENT OF LANDS AND MINES

COMMERCIAL CATCH, 1948-49

Lake	No. of Licenses	Ling	Tullibee	Suckers	Perch	Pickeral	Pike	Trout	Whitefish	Total
Amisk	5	600	130	200	.....	93,000	4	380	.....	1,314
Athabasca	39	.....	1,100	.....	200	100	600	.....	98,709	199,820
Battise	1	.....	.....	.....	16,349	6,465	26,088	.....	31,802	80,704
Beaver	45	.....	.....	.....	530	.....	2,735	.....	.....	3,265
Behan	1	.....	.....	.....	.....	981	155	.....	17,005	17,986
Bischo	8	.....	.....	.....	400	.....	4,611	.....	.....	6,233
Blackett	9	.....	.....	.....	.....	.....	.....	6,900	7,380	14,280
Boitall (Pearson)	5	.....	.....	.....	2,204	.....	28,460	2,048	32,522	42,554
Buck (6-11-4)	30	.....	.....	.....	.....	.....	132	4,122	.....	4,122
Buck (6-11-5)	2	2,000	57,850	76,860	.....	500	3,000	60,000	65,600	192,946
Calling	31	40,850	.....	.....	.....	1,055	7,260	29,410	9,390	29,410
Chip	21	.....	.....	.....	.....	.....	14,909	.....	.....	57,933
Christina	6	.....	43,024	.....	.....	.....	.....	.....	8,773	50,797
Chump (Johnson)	10	1,040	.....	.....	634	5,261	.....	30,000	34,000	34,000
Cold	10	.....	.....	800	200	.....	.....	.....	.....	10,010
Crooked	3	10	.....	.....	400	.....	600	2,675	.....	6,075
Cross	3	3,400	.....	.....	.....	136	868	.....	1,535	5,510
Elinor	6	.....	.....	.....	.....	1,480	800	600	10,420	14,770
Fawcett	3	700	.....	.....	.....	770	.....	.....	2,500	2,500
Fickle	3	.....	.....	.....	.....	1,65	.....	12,217	.....	12,382
Fork	6	.....	.....	.....	.....	.....	700	.....	700	10,081
Frances	1	.....	.....	.....	1,946	.....	8,135	.....	.....	8,064
Frenchman	11	.....	.....	.....	.....	.....	3,064	18,120	.....	19,182
Frog	8	.....	.....	.....	1,062	.....	1,301	1,301	.....	8,181
Garner (Hollow)	12	.....	.....	.....	.....	1,30	725	2,100	.....	2,230
Georges (Cheecham)	1	6,891	.....	.....	.....	725	1,631	.....	27,684	7,635
Ghost	3	.....	.....	.....	273	4,631	92,535	.....	128,713	128,713
Gregoire (Willow)	1	.....	.....	.....	189	1,297	.....	.....	.....	3,064
Heat	15	3,640	.....	.....	507	141	2,716	.....	.....	10,300
Helena	3	.....	449	.....	574	69	2,767	1,575	.....	4,975
Hope	10	.....	12	.....	.....	.....	3,250	.....	.....	3,255
Ipatick	12	.....	.....	.....	.....	.....	7,384	.....	.....	8,503
Ironwood	6	.....	.....	.....	32	717	1,990	.....	.....	18,694
Island (67-24-4)	2	370	.....	.....	1,820	8,460	14,404	.....	.....	15,696
Jackson	3	22	60	227	402	663	200	26,442	39,803	39,803
Keesewin	6	6,350	.....	.....	5,055	.....	2,755	.....	7,810	23,525
Kinnaird	6	6	.....	.....	12,650	50	10,825	.....	.....	44,687
Lac Ste. Anne	67	.....	.....	.....	.....	.....	.....	446,876	4,609,764	4,609,764
Lac St. Vincent	16	.....	.....	.....	.....	.....	1,770	1,065	1,212	1,833
Lawrence	16	.....	.....	.....	.....	61	.....	.....	8,274	8,924
Lesser Slave	16	C127	78,166	3,949,008	1,200	3,270	59,123	72,121	.....	8,274
Little (62-11-5)	2	.....	.....	.....	.....	.....	147	.....	.....	1,212
Little Egg (Bio)	3	.....	.....	.....	.....	61	1,770	.....	.....	1,833
Little Whiteman No. 1	6	.....	150	.....	.....	100	400	.....	.....	8,924

FISH AND GAME ADMINISTRATION

83

COMMERCIAL CATCH, 1948-49—Continued

Lake	No. of Licenses	Ling	Tullibee	Suckers	Perch	Pickeral	Pike	Trout	Whitefish	Total
Long (63-19-4)	5	.....	.....	25,500	.....	.....	2,450	.....	.....	2,440
Long (68-24-4)	4	.....	.....	.....	.....	.....	4,124	.....	.....	26,710
Lower Mann	5	.....	.....	.....	.....	.....	2,000	.....	.....	4,124
McGregor	114	.....	.....	.....	.....	4,300	.....	.....	131,315	131,315
Moose	33	.....	.....	.....	.....	.....	.....	.....	9,883	31,959
Muriel	148	.....	.....	.....	.....	.....	.....	.....	39,690	39,690
Newell	103	2,800	.....	.....	.....	.....	18,000	44	266,484	287,398
Orloff	5	.....	.....	.....	40	.....	.....	.....	28,650	28,650
Peerless	6	.....	.....	.....	295	.....	.....	3,419	32,312	32,312
Pikes	6	.....	.....	.....	220	.....	2,860	.....	28,648	28,648
Pigeon	296	600	96,389	.....	.....	.....	2,600	.....	.....	3,040
Pinehurst	12	700	16,700	3,200	.....	1,218	1,364	.....	67,380	67,380
Rock Island	8	.....	700	.....	.....	770	3,671	.....	103,072	103,072
Saddle	26	1,500	9,640	4,649	12,484	1,218	3,100	19,700	44,070	44,070
Sandy (79-22-4)	3	.....	750	.....	100	.....	60	.....	17,133	17,133
Saibert	6	.....	.....	.....	.....	.....	1,000	.....	4,200	4,200
Shining Bank	6	.....	.....	.....	.....	200	736	13,191	1,760	1,760
Skeleton	6	.....	16,445	.....	.....	.....	1,180	.....	13,191	13,191
Sternerton	4	.....	.....	.....	.....	.....	.....	675	19,246	19,246
Sturgeon	16	.....	.....	.....	.....	.....	592	1,459	4,020	4,020
Touchwood	8	.....	30,753	2,241	284	14,152	.....	.....	23,666	23,666
Wabamun	1163	.....	.....	11,63	.....	60,894	.....	.....	300,530	300,530
Whitefish	66	.....	68,911	678	13,659	.....	.....	31,382	176,554	176,554
Williams	46	.....	.....	.....	.....	300	.....	43,385	43,385	43,385
Winnifred	19	2,000	8,500	2,000	.....	20,720	4,970	.....	25,630	25,630
Wolf	50	.....	.....	.....	.....	3,000	9,500	17,000	42,000	42,000
	133,286	4,389,130	121,810	46,555	259,944	559,797	3,463	1,759,816	7,222,901	7,222,901

NUMBER AND VALUE OF VESSELS, BOATS, FISHING GEAR AND EQUIPMENT

VESSELS, BOATS	1944-45		1945-46		1946-47		1947-48		1948-49	
	No.	Value	No.	Value	No.	Value	No.	Value	No.	Value
Row	146	\$ 3,340.00	132	\$ 6,124.00	359	\$ 9,160.00	143	\$ 3,820.00	110	\$ 3,440.00
Gasoline	181	5,850.00	222	8,380.00	292	10,680.00	257	82,020.00	197	62,975.00
Diesel	1	5,900.00	1	5,500.00	.....	.....	2	400.00	.....	.....
Barges	3	16,000.00	3	16,000.00	.....	.....	.....	.....	.....	.....
	327	\$ 81,050.00	358	\$ 111,814.00	651	\$ 115,960.00	402	\$ 86,240.00	307	\$ 66,465.00
PIERS AND WHARVES										
Summer	29	\$ 5,040.00	31	\$ 7,000.00	37	\$ 8,370.00	51	\$ 21,335.00	19	\$ 5,220.00
Winter	6	2,300.00	20	8,600.00	93	11,230.00	10	370.00	.....	.....
FISH PLANTS AND ICE HOUSES										
Summer	127	\$ 42,245.00	63	\$ 34,750.00	180	\$ 44,920.00	150	\$ 81,185.00	30	\$ 31,395.00
Winter	41	31,400.00	41	74,500.00	75	39,670.00	46	9,657.00	16	14,110.00
GR. NETS										
May 16 - Sept. 30	3,803	\$ 65,360.00	5,716	\$ 95,529.00	6,387	\$ 102,404.00	5,222	\$ 81,329.00	3,849	\$ 89,864.00
Dec. 1 - Dec. 31	2,738	37,926.00	3,700	49,238.00	6,304	66,566.00	1,613	20,844.00	1,930	23,080.00
Jan. 1 - Mar. 31	7,043	92,888.00	12,949	194,817.00	10,140	165,304.00	6,890	74,880.00	5,953	104,143.00

DEPARTMENT OF LANDS AND MINES

QUANTITIES AND VALUE OF FISH CAUGHT AND MARKETED

Species	Period	Weight (lbs.)	Value to Fishermen	Value as Marketed
Whitefish	May 16/48 to Sept. 30/48	578,823	\$58,619.47	\$16,328.82
	Dec. 1/48 to Dec. 31/48	193,156	20,381.40	36,548.10
	Jan. 1/49 to Mar. 31/49	987,837	13,299.49	207,211.43
Trout (Lake)	May 16/48 to Sept. 30/48	1,759,816	\$ 213,290.36	\$ 350,088.35
	Dec. 1/48 to Dec. 31/48	.....	.....	.....
	Jan. 1/49 to Mar. 31/49	3,463	239.33	848.97
Pickerel	May 16/48 to Sept. 30/48	230,318	\$ 12,386.58	\$ 23,601.49
	Dec. 1/48 to Dec. 31/48	16,095	1,516.65	2,179.85
	Jan. 1/49 to Mar. 31/49	12,631	1,352.44	1,989.76
Pike	May 16/48 to Sept. 30/48	259,044	\$ 15,852.67	\$ 27,771.10
	Dec. 1/48 to Dec. 31/48	87,745	3,662.25	5,244.62
	Jan. 1/49 to Mar. 31/49	164,352	9,982.20	15,164.70
Tullibee	May 16/48 to Sept. 30/48	559,797	\$ 67,562.94	\$ 131,424.29
	Dec. 1/48 to Dec. 31/48	2,654,192	28,405.77	45,448.54
	Jan. 1/49 to Mar. 31/49	1,120,406	14,415.59	22,874.63
Perch	May 16/48 to Sept. 30/48	4,339,180	\$ 110,384.30	\$ 199,747.46
	Dec. 1/48 to Dec. 31/48	30,923	2,375.63	4,070.00
	Jan. 1/49 to Mar. 31/49	2,828	216.77	365.31
Mixed Fish (Ling, Suckers)	May 16/48 to Sept. 30/48	12,804	1,386.21	1,793.24
	Dec. 1/48 to Dec. 31/48	.....	.....	.....
	Jan. 1/49 to Mar. 31/49	.....	.....	.....
		46,555	\$ 3,140.60	\$ 4,280.38
		166,136	1,429.90	1,947.31
		60,435	612.85	835.00
		28,525	.....	.....
		255,096	.....	.....
		.....	5,183.35	\$ 7,072.69
		7,222,901	.....	.....
		.....	\$374,991.83	.....
		.....	.....	\$636,356.01

TROUT DISTRIBUTION 1948

CUTTHROAT

	Number of Yearlings		
Oldman River:			
Willow Creek	1,500	Sheep Creek	10,400
North Willow Creek	1,500	Prairie Creek (Sheep)	2,000
Trout Creek	2,000	Pirmez Creek	3,000
Brown Creek	1,640	Fish Creek	3,000
West Castle River	2,560	Jumping Pound Creek	9,000
Carbondale River	2,560	Little Jumping Pound Creek	1,000
East Castle River	2,560	Elbow River	10,000
Bow River:			
Highwood River	4,000	Trout Creek	2,300
		Sibbald Creek	1,000
		Prairie Creek	1,000

RAINBOW

Waterton River:		Castle River	9,988
Butcher Creek	2,880	Beaver Mines Creek	500
Carpenter Creek	2,880	Buck Horn Dams	270
Drywood Creek	2,880	Cyr Creek	540
Russel Dam	263	Pincher Creek	9,768
Yarrow Creek	2,192	Lyndon Creek	12,000
Pine Creek	4,384	Beaver Lake	2,880
Lees Creek	9,500	Beauvais Lake	9,090
Tough Creek	1,380	Crowsnest Lake	3,014
Oldman River:		Island Lake	3,000
Mill Creek	2,390	Burmis Lake	600
Livingstone River	2,500	Spring Lake (N. 19-5-29-4)	50
Todd Creek	380	Lang Dam (S. 22-1-6-W5)	100
Crowsnest River	6,168	Lang Lake (N. 31-1-6-W5)	810

LOCH LEVEN

Clearwater River:		Horseshoe Creek	2,500
Alford Creek	9,500	Prentes Creek	3,000
Schrader Creek	3,000	Buster Creek	1,400
Clear Creek	1,300	Rasmunson Creek	2,000
Prairie Creek	3,000	Chambers Creek	1,000
Red Deer River:		Haven Creek	2,000
Little Red Deer River	3,000	Tishner Creek	2,000
Raven River	1,800	Shunda Creek	2,400
South Raven River	7,600	Canyon Creek	1,150
North Saskatchewan River:		Frisco Creek	2,000
Wolf Creek	4,500	Trapper Creek	1,000

EASTERN BROOK

Bow River:	Number of Yearlings	Number of 2 Yr. Olds	Number of Yearlings	Number of 2 Yr. Olds
Big Hill Creek	500		Embarras River	940
McLean Ck.		2,000	Dummy Creek	1,000
Prairie Creek	3,000		Clearwater River:	
McLeod River:			Alford Creek	6,000
Roy Creek	2,000		Red Deer River:	
Mill Creek	4,000		Spring Ck.	5,000
White Creek	2,000		Eagle Ck.	5,500
Luscar Creek		500	Beaver Ck.	15,000
Coalspur Creek		500	Cold Lake:	200,000 Eyed Eggs
McNeil Creek		500		
Whitehorse Creek		1,000		

LAKE TROUT

Ghost Dam: 35,000 Fingerlings

TOTAL DISTRIBUTION OF TROUT

Cutthroat	61,020
Rainbow	90,407
Loch Leven	54,150
Eastern Brook	249,440
Lake Trout	35,000
Total	490,017

PERCH

Cross Lake	15,000
Narrow Lakes	15,000
McDermid Lake	15,000
Island Lake	15,000
Fish Lake	15,000
Dried Meat Lake	18,000
Hastings Lake	25,000
Lost Lake	25,000
Hardisty Lake	12,000
Cottage Lake	25,000
Menaik (43-26-4)	15,000
Clear Lake	25,000
Medicine Lake	25,000
Long Island Lake	15,000
Upper Mann Lake (2 Plantings)	32,000
Upper Therien Lake	14,800
Bonnie Lake	15,000
Cache Lake	15,000
Thunder Lake	15,000
Total	351,800

ALBERTA FISH EXPORTS

FISCAL YEAR 1948-49

EXPORTS TO CANADIAN MARKETS:	Weight in Pounds
Whitefish	255,980
Pickarel	23,486
Pike	17,259
Perch	11,489
Trout	4,365
Tullibee	760
Total	313,339

EXPORTS TO CHICAGO MARKETS:

Whitefish	741,137
Pickarel	128,638
Pike	57,446
Perch	39,547
Trout	165
Tullibee	23,814
Suckers	12,300
Total	1,003,047

EXPORTS TO NEW YORK MARKETS:

Whitefish	131,950
Perch	1,140
Total	133,090

EXPORTS TO MISCELLANEOUS U.S. MARKETS:

Whitefish	210
Pickarel	288
Tullibee	15
Total	513

RECAPITULATION:

Whitefish	1,129,277
Pickarel	152,412
Pike	74,705
Perch	52,176
Trout	4,530
Tullibee	24,589
Suckers	12,300
Total	1,449,889

Mining Lands Administration

REPORT OF THE SUPERINTENDENT OF MINING LANDS

H. H. Somerville

The exploration and development for oil greatly increased during 1948, the increase being primarily due to the rapid development of the Leduc field and the search for similar fields in the Province. The tonnage of coal produced was approximately the same as that for the previous year but an increase in value per ton gave a corresponding increase in revenue to primary producers.

Footage drilled during 1948 established a new record with 1,663,687 feet or 315 miles of hole. This was practically double the 1947 total of 882,358 feet and four times the footage for 1946. The production of petroleum set a new record for the Province exceeding the previous record year of 1942 by 800,000 barrels.

The production and value of Alberta's chief minerals for 1948 were as follows: coal, 8,111,013 tons, valued at \$41,875,044; petroleum, 10,973,583 barrels, valued at \$35,127,751; natural gas, 61,034,698 Mcf., valued at \$3,051,735; and salt, 34,231 tons valued at \$342,310.

Mineral rights, solid, liquid and gaseous, the property of the Crown in the right of the Province, are not sold, but are disposed of by lease, reservation, permit, or grant for limited periods of time. Revenue is obtained from fees, rentals, bonuses, royalties and sales of leases. During the fiscal year these sources provided \$13,894,752.76, being almost as much as the total for the previous ten fiscal years.

In August, 1947, the Province adopted new regulations requiring the establishment of Crown reserves of at least equal acreage to areas granted under petroleum and natural gas lease and more than half of the revenue of the Division was derived from sales of leases comprising such Crown reserves, particulars of which are included in this report.

The most important discovery of the fiscal year was made at Redwater where Imperial Redwater No. 1 Well located about 35 miles northeast of Edmonton found the D3 coral reef at 3,105 feet, subsequent coring and testing disclosed oil bearing porosity 146 feet thick. The well was acidized and on October 1, 1948, placed on production with an open flow potential of 1,795 barrels of 35° A.P.I. oil daily. Step out wells completed northwest and southeast of the discovery gave the field a proven length of 10 miles. Indications are that this represents the largest known reservoir of crude oil in Canada. Nineteen wells were on production in the field at March 31, 1949.

West of the Woodbend township, Imperial Schoepp No. 1 gave indications that another major discovery had been made. After finding evidence of production in the D2 zone, the hole

found an oil bearing D3 zone over 500 feet thick. Oil is similar to that found at Leduc and while the test on open flow will undoubtedly exceed anything in the history of the Province, the test had not been made at the close of the fiscal year.

The condensate discovery well of Canadian Gulf Oil Company south of Pincher Creek was completed at a total depth of 12,516 feet after extensive tests. Indicated daily potential of the well is 43,000,000 cubic feet of gas and 1,500 barrels of distillate. Source of the flow is the Madison limestone, principal producing formation at Turner Valley and source of the wet gas at Jumping Pound.

At Barrhead, northwest of Edmonton, a large flow of gas and some heavy crude were obtained in a section of Madison limestone. As only one well has been completed, it is not possible to make an estimate of the extent of the discovery.

A well drilled at Bon Accord was a D2 zone discovery when it found an oil bearing section 25 feet thick 20 miles northeast of Edmonton, but water is included in the oil recovery.

Alberta's prolific gas producing formation, the Viking Sand, yielded its first commercial production of crude oil at Superior-Joseph Lake No. 1 Well, about 20 miles east of Leduc. The light sulphur free crude was found in a seven foot section from 3,263 to 3,270 feet.

In August, 1948, a well northeast of the Leduc field found light crude in commercial quantities in the Blairmore formation, a lower Cretaceous sandstone. Six wells obtained production from this pool. At Whitemud, northeast of the Leduc Cretaceous pool, an exploratory well flowed oil from the same horizon during a drill stem test.

Two wells in the Lac La Biche area encountered strong flows of natural gas from the Viking Sand. A well near Hanna found a strong flow of wet gas in a lower Cretaceous sand. Other gas discoveries were made in the lower Cretaceous at Boyle, east of Athabasca, and in an upper Cretaceous formation north of Nisku.

A number of new interests joined in the search for oil and during the fiscal year two hundred and ninety-six reservations were granted comprising 20,312,326 acres. The holder of each reservation is required to conduct some type of geophysical examination or drill a well or wells, so by the time the reservations terminate, expenditures on a large scale will have been made. The number of geophysical parties consequently increased and 84 licenses were issued in the fiscal year.

During the year, 2,528 applications for mineral rights were made at the offices of the Mining Recorders at Edmonton, Calgary and Peace River which required the preparation of a similar number of files for the Division. Several inquiries were made as to the availability of mineral rights mostly for petroleum and natural gas leases or reservations, by personal application and by correspondence. The Division dispatched a total of 32,118 letters during the fiscal year under review.

The natural resources of Alberta were transferred from the Dominion Government to the control of the Government

of Alberta on October 1, 1930, and the following tabulation shows the numbers and acreages of the various leases issued from that date to March 31, 1949.

MINING LAND LEASES

Type of Lease	Active at date of transfer	Issued	Reinstated	Divided	Cancelled	Renewed	Active at March 31st 1949
Petroleum and natural gas	18,863	16,611	172	957	30,871	242	5,490
Petroleum and natural gas crown reserve	5	20	...	...	25	...	...
Coal, provincial lands	620	764	6	7	726	206	465
Coal, school lands	60	60	1	...	70	13	38
Quarrying	45	119	...	...	70	20	74
Quartz mining	4	...	...	...	...	...	4
Salt	1	1	...	...	1	...	1
Bituminous sands	4	4	...	...	7	...	1
Miscellaneous	1	4	...	3	1	1	1
Dredging	32	20	...	52	...	0	...
TOTAL	19,635	17,603	179	964	31,825	482	6,074

ACREAGE CONTAINED IN ABOVE LEASES

Type of Lease	Active at date of transfer	Issued	Reinstated	Cancelled	Renewed	Active at March 31st 1949
Petroleum and natural gas 2,454,802	6,771,992	35,182	6,146,543	27,608	3,087,825	
Petroleum and natural gas crown reserve	6,160	22,561	...	28,721	...	...
Coal, provincial lands	236,984	219,829	735	196,949	103,084	157,065
Coal, school lands	9,570	5,784	53	7,786	3,044	4,577
Quarrying	1,675	1,894	...	1,711	271	1,587
Quartz mining	182	...	...	...	...	...
Salt	200	6,721	...	200	...	6,721
Miscellaneous	3,560	345	...	43	22	3,840
Bituminous sands	3,952	8,311	...	9,849	...	2,414
TOTAL	2,717,085	7,036,937	35,970	6,391,802	133,979	3,264,211
Dredging (in miles)	145	84	...	229	...	...

STATEMENT OF BUSINESS TRANSACTED, 1948-49
PETROLEUM AND NATURAL GAS

	Number	Acres
Leases issued	3,892	2,851,491
Leases cancelled and relinquished	931	557,619
Leases reinstated	11	4,003
Prospecting reservations granted	296	20,312,326
Prospecting reservations terminated	86	6,460,819
Fees, rentals and bonuses collected.....	\$ 2,353,063.69	
Royalties collected	1,753,573.00	
Crown Reserve sales	8,911,803.51	
TOTAL	\$13,018,440.20	

COAL

	Number	Acres
Leases issued on provincial lands	96	36,221
Leases cancelled and relinquished on provincial lands	28	5,909
Leases issued on school lands	9	1,757
Leases cancelled and relinquished on school lands	1	40
Domestic permits issued	4	...
Fees and rentals collected	\$ 177,788.08	
Royalties collected	646,539.66	
TOTAL	\$ 824,327.74	

QUARRYING

	Number	Acres
Leases issued	10	50
Leases cancelled and relinquished	4	577
Sand, stone and gravel permits issued	32	....
Fees and rentals collected	\$ 1,155.34	
Royalties collected	22,192.39	
TOTAL	\$ 23,347.73	

MISCELLANEOUS

	Number
Bituminous sands leases issued .....	....
Bituminous sands leases cancelled .....	....
Permits to collect bitumen issued	1
Quartz mining claims granted	15
Quartz mining certificates of work issued	1
Powers of Attorney (quartz) filed	3
Placer claims granted	2
Powers of Attorney (placer) filed .....	....
Bar-digging permits issued .....	....
Salt leases issued .....	....
Geophysical licenses issued	84
Fees, rentals and royalties collected	\$28,637.09

ASSIGNMENTS REGISTERED

Nature	Number
Petroleum and natural gas	667
Coal	40
Quarrying	6
Miscellaneous	2
TOTAL	715

PETROLEUM AND NATURAL GAS

Development of Leases.—Credit of not in excess of 50% of the approved expenditures incurred in geophysical examinations including drilling on petroleum and natural gas reservations may apply to the rental for one year of any lease or leases acquired out of the reservation. With the amendment and consolidation of the petroleum and natural gas regulations on March 29, 1948, the application of credit to lease rentals for other years was discontinued but rentals falling due before that date were still subject to satisfaction from credit. During the fiscal year under review, rentals due the Province amounting to \$3,422,694.27 were satisfied from such expenditures. The total revenue received in cash for fees, rentals and bonuses was \$2,353,063.69 which added to the expenditures accepted in lieu of rentals makes a total of \$5,775,757.96.

Disposal by Public Tender.—Bonuses amounting to \$51,022.45 were accepted during the fiscal year at sales by public tender of petroleum and natural gas rights.

Disposal of Crown Reserves.—One hundred and twenty-five parcels were sold during the fiscal year, particulars of which are included in this report.

CROWN RESERVES PURCHASED IN
WOODBEND AREA

Description	Owner Accepted from:	Purchase Price		Share of Oil Products
		Cash	Products	
S.E. $\frac{1}{4}$ 12-51-26-4	Phillips Petroleum Company	\$ 81,591.98	....
S.E. $\frac{1}{4}$ 2-51-26-4	A. W. Shaw	50,171.00	....
S.W. $\frac{1}{4}$ 4-51-26-4	Fred A. Schultz	25,000.00	38%	
S.W. $\frac{1}{4}$ 7-51-26-4	The British American Oil Co. Ltd.	30,330.00	....

CROWN RESERVES PURCHASED IN
WOODBEND AREA (Continued)

Description	Offer Accepted from:	Cash	Purchase Price	Share of Oil Products
N.W. $\frac{1}{4}$ 1-51-26-4	The British American Oil Co. Ltd.	47,864.00		.....
S.W. $\frac{1}{4}$ 3-51-26-4	Anglo-Canadian Oil Co. Ltd.	56,351.00		.....
S.W. $\frac{1}{4}$ 5-51-26-4	Anglo-Canadian Oil Co. Ltd.	62,601.00		.....
N.E. $\frac{1}{4}$ 6-51-26-4	Anglo-Canadian Oil Co. Ltd.	67,601.00		.....
N.W. $\frac{1}{4}$ 12-51-26-4	The British American Oil Co. Ltd.	51,655.55		.....
S.E. $\frac{1}{4}$ 18-51-26-4	Anglo-Canadian Oil Co. Ltd.	80,101.00		.....
N.W. $\frac{1}{4}$ 19-51-26-4	Home Oil Company Limited	26,007.00		.....
S.W. $\frac{1}{4}$ 23-51-26-4	Imperial Oil Limited	10,222.71		.....
N.E. $\frac{1}{4}$ 27-51-26-4	Maple Leaf Investments Ltd.	21,011.00		.....
N.E. $\frac{1}{4}$ 30-51-26-4	Home Oil Company Limited	33,007.00		.....
N.E. $\frac{1}{4}$ 32-51-26-4	Home Oil Company Limited	12,007.00		.....
S.E. $\frac{1}{4}$ 33-51-26-4	Home Oil Company Limited	7,607.00		.....
S.E. $\frac{1}{4}$ 19-51-26-4	Home Oil Company Limited	45,109.00		.....
N.E. $\frac{1}{4}$ 29-51-26-4	Home Oil Company Limited	55,209.00		.....
N.W. $\frac{1}{4}$ 30-51-26-4	Home Oil Company Limited	16,069.00		.....
S.E. $\frac{1}{4}$ 30-51-26-4	Anglo-Canadian Oil Co. Ltd.	35,200.00		.....
N.E. $\frac{1}{4}$ 31-51-26-4	Anglo-Canadian Oil Co. Ltd.	12,200.00		.....
N.W. $\frac{1}{4}$ 31-51-26-4	Home Oil Company Limited	12,059.00		.....
N.E. $\frac{1}{4}$ 18-51-26-4	Home Oil Co. Ltd. and Anglo-Canadian Oil Co. Ltd.	115,287.00		.....
N.E. $\frac{1}{4}$ 19-51-26-4	Home Oil Co. Ltd. and Anglo-Canadian Oil Co. Ltd.	105,267.00		.....
S.W. $\frac{1}{4}$ 19-51-26-4	Home Oil Co. Ltd. and Anglo-Canadian Oil Co. Ltd.	42,203.00		.....
N.W. $\frac{1}{4}$ 29-51-26-4	Home Oil Co. Ltd. and Anglo-Canadian Oil Co. Ltd.	90,225.00		.....
S.W. $\frac{1}{4}$ 30-51-26-4	Home Oil Co. Ltd. and Anglo-Canadian Oil Co. Ltd.	47,223.00		.....
S.E. $\frac{1}{4}$ 31-51-26-4	Home Oil Company Limited	45,226.00		.....
S.W. $\frac{1}{4}$ 31-51-26-4	Home Oil Company Limited	30,151.00		.....
N.W. $\frac{1}{4}$ 32-51-26-4	Home Oil Company Limited	45,227.00		.....
S.E. $\frac{1}{4}$ 32-51-26-4	Home Oil Company Limited	35,172.00		.....
S.W. $\frac{1}{4}$ 32-51-26-4	Home Oil Company Limited	45,228.00		.....
N.E. $\frac{1}{4}$ 12-51-26-4	Continental Oil Co. of Canada Ltd. and Raymond Francis Castle	25,000.00	17 $\frac{1}{4}$ %	.....
S.E. $\frac{1}{4}$ 13-51-26-4	Husky Oil & Refining Ltd. and Glasgow Oil Co. Ltd.	25,000.00	17 $\frac{1}{4}$ %	.....
S.E. $\frac{1}{4}$ 4-51-26-4	Home Oil Co. Ltd., Anglo-Canadian Oil Co. Ltd., and The Calgary & Edmonton Corporation Ltd.	61,107.00		.....
S.W. $\frac{1}{4}$ 4-51-26-4	Home Oil Co. Ltd., Anglo-Canadian Oil Co. Ltd., and The Calgary & Edmonton Corporation Ltd.	61,107.00		.....
S.E. $\frac{1}{4}$ 5-51-26-4	Home Oil Co. Ltd., Anglo-Canadian Oil Co. Ltd., and The Calgary & Edmonton Corporation Ltd.	61,107.00		.....
S.E. $\frac{1}{4}$ 7-51-26-4	Home Oil Co. Ltd., Anglo-Canadian Oil Co. Ltd., and The Calgary & Edmonton Corporation Ltd.	61,107.00		.....
N.E. $\frac{1}{4}$ 7-51-26-4	Home Oil Co. Ltd., Anglo-Canadian Oil Co. Ltd., and The Calgary & Edmonton Corporation Ltd.	15,159.00		.....
S.W. $\frac{1}{4}$ 18-51-26-4	Home Oil Co. Ltd., Anglo-Canadian Oil Co. Ltd., and The Calgary & Edmonton Corporation Ltd.	40,107.00		.....
N.W. $\frac{1}{4}$ 18-51-26-4	Home Oil Co. Ltd., Anglo-Canadian Oil Co. Ltd., and The Calgary & Edmonton Corporation Ltd.	40,107.00		.....
		40,107.00		.....
			\$1,808,984.24	

CROWN RESERVES PURCHASED IN
REDWATER AREA

Description	Offer Accepted from:	Cash	Purchase Price
N.E. $\frac{1}{4}$ 34-57-22-4	Pacific Petroleum Ltd. (N.P.L.)	101,003.00	
N.E. $\frac{1}{4}$ 36-57-22-4	Anglo-Canadian Oil Co. Ltd.	351,025.00	
N.W. $\frac{1}{4}$ 36-57-22-4	Pacific Petroleum Ltd. (N.P.L.)	283,003.76	
S.E. $\frac{1}{4}$ 36-57-22-4	Home Oil Company Limited	302,039.00	
N.E. $\frac{1}{4}$ 24-57-22-4	Pacific Petroleum Ltd. (N.P.L.)	127,077.77	
S.W. $\frac{1}{4}$ 36-57-22-4	British American Oil Co. Ltd.	450,212.00	
Sec. 15-57-21-4	Royalite Oil Company Limited	3,153,491.00	
Sec. 30-57-21-4	The British American Oil Co. Ltd. and Hudson's Bay Oil and Gas Co. Ltd.	2,044,580.00	
			\$6,812,431.53

CROWN RESERVES PURCHASED
ELSEWHERE IN ALBERTA

Description	Offer Accepted from:	Cash	Purchase Price
Sec. 1-9-17-4	The California Standard Co.	646.40	
S. $\frac{1}{2}$ 2-9-17-4	The California Standard Co.	323.20	
S.E. $\frac{1}{4}$ 3-9-17-4	The California Standard Co.	161.60	

CROWN RESERVES PURCHASED
ELSEWHERE IN ALBERTA (Continued)

Offer Accepted from:	Cash Purchase Price
The British American Oil Co. Ltd.	100.00
The British American Oil Co. Ltd.	100.00
The British American Oil Co. Ltd.	100.00
The British American Oil Co. Ltd.	100.00
The British American Oil Co. Ltd.	320.00
Calmont Oils Limited	1,000.00
The British American Oil Co. Ltd.	960.00
The British American Oil Co. Ltd.	1,920.00
The British American Oil Co. Ltd.	2,560.00
Twin River Petroleums Ltd.	111.00
Twin River Petroleums Ltd.	111.00
Twin River Petroleums Ltd.	111.00
Union Oil Company of California	303.10
Union Oil Company of California	303.10
Union Oil Company of California	107.10
Commonwealth Petroleum Limited	1,447.60
Union Oil Company of California	107.10
Union Oil Company of California	107.10
Union Oil Company of California	302.10
Union Oil Company of California	206.10
Union Oil Company of California	107.10
Union Oil Company of California	107.10
Union Oil Company of California	107.10
Union Oil Company of California	107.10
Union Oil Company of California	107.10
Union Oil Company of California	107.10
Union Oil Company of California	107.10
Union Oil Company of California	107.10
Union Oil Company of California	107.10
Union Oil Company of California	107.10
Union Oil Company of California	107.10
Union Oil Company of California	107.10
Union Oil Company of California	107.10
Union Oil Company of California	107.10
Imperial Oil Limited	9,126.37
Imperial Oil Limited	677.55
Imperial Oil Limited	1,717.27
Imperial Oil Limited	1,717.27
Husky Oil & Refining Ltd.	2,252.80
Husky Oil & Refining Ltd.	3,532.80
Husky Oil & Refining Ltd.	1,602.80
The California Standard Company	648.50
Vermilion Consolidated Oils Ltd.	100.00
Barns dall Oil Company	5,155.00
Brandon Exploration Company	43,009.00
Brandon Exploration Company	43,009.00
Brandon Exploration Company	10,009.00
Brandon Exploration Company	43,009.00
Brandon Exploration Company	10,009.00
Imperial Oil Limited	8,280.00
Imperial Oil Limited	1,878.60
Imperial Oil Limited	8,160.00
Imperial Oil Limited	8,800.00
Imperial Oil Limited	8,160.00
Imperial Oil Limited	8,800.00
Imperial Oil Limited	6,601.00
Imperial Oil Limited	7,245.00
Imperial Oil Limited	7,245.00
Imperial Oil Limited	6,601.00
Imperial Oil Limited	2,817.50
Imperial Oil Limited	2,062.50
Imperial Oil Limited	4,186.00
Imperial Oil Limited	3,300.00
Imperial Oil Limited	4,025.00
Imperial Oil Limited	7,471.00
Imperial Oil Limited	8,676.00
Imperial Oil Limited	3,381.00
Imperial Oil Limited	4,991.00
Imperial Oil Limited	1,610.00
Pacific Petroleums Limited	7,621.00
Imperial Oil Limited	4,075.00
Imperial Oil Limited	4,025.00
Calmont Oils Limited	1,748.00
Calmont Oils Limited	1,695.00
Pacific Petroleums Limited	7,619.00
Imperial Oil Limited	2,415.00
Imperial Oil Limited	1,590.00

\$334,021.46

Number and Area of Leases.—During the year, 3,892 petroleum and natural gas leases were granted covering 2,851,-492 acres and at the close of the fiscal year, a total of 5,490 leases were active containing an area of 3,087,825 acres.

Reservations.—With the amendment and consolidation of the regulations on March 29, 1948, no applicant may hold more than two reservations each to comprise not in excess of the available Crown rights in four and one-third townships. Each reservation must be held by the original applicant until its termination and extension fees following December 31, 1948, cannot be satisfied from expenditures incurred. Two hundred and ninety-six reservations were issued under these regulations during the year, covering an area of 20,312,326 acres. At the close of the year, 341 reservations were active, containing an area of 23,739,049 acres.

COAL

In the fiscal year, 96 leases were issued containing 36,221 acres, being made up of new and renewal leases. There are now 465 active leases comprising 157,065 acres.

During the current fiscal year the following quantity of coal, subject to Crown royalty, was mined:

	Tons
Provincial lands' leases	4,651,092
School lands' leases	474,839
Coal lands' and mineral sales	1,073,081
 TOTAL	 6,199,012

Crown royalties collected on coal mined in Alberta since April 1st, 1907, are as follows:

CROWN ROYALTIES COLLECTED ON COAL

Fiscal Year	Royalty Paid	Fiscal Year	Royalty Paid
1907-08	\$ 7,621.67	1920-21	\$ 190,545.80
1908-09	5,322.39	1921-22	185,436.88
1909-10	153,559.98	1922-23	171,723.83
1910-11	218,932.88	1923-24	210,389.53
1911-12	104,894.55	1924-25	148,979.10
1912-13	142,997.79	1925-26	188,277.94
1913-14	147,198.75	1926-27	218,150.10
1914-15	104,489.77	1927-28	231,757.96
1915-16	67,190.17	1928-29	254,616.27
1916-17	149,447.82	1929-30	248,083.71
1917-18	144,634.75	1930-31 (First half)*	90,052.07
1918-19	175,637.66		
1919-20	181,641.80		
			\$3,741,633.17
		Provincial Lands	School Lands
1930-31 (Last half)*	\$105,126.51	\$ 5,014.29	\$110,140.80
1931-32	145,170.33	6,354.09	151,524.42
1932-33	143,800.01	4,971.78	148,771.79
1933-34	193,527.82	9,520.13	203,047.95
1934-35	176,122.43	12,365.39	188,487.82
1935-36	186,691.23	19,779.76	206,470.99
1926-37	175,214.33	18,596.00	193,810.33
1937-38	158,227.11	15,159.15	173,386.26
1938-39	143,070.78	9,270.23	152,341.01
1939-40	168,802.75	7,812.78	176,615.53
1940-41	200,045.68	15,841.24	215,886.92
1941-42	216,777.95	22,849.83	239,627.78
1942-43	235,613.19	24,700.43	260,313.62
1943-44	239,590.96	19,732.99	259,323.95
1944-45	251,136.50	22,094.01	273,230.51
1945-46	260,144.66	27,514.41	287,659.07
1946-47	286,486.89	30,611.98	317,098.87
1947-48	261,554.86	26,660.60	288,215.46
1948-49	600,424.43	46,115.23	646,539.66
 TOTAL			 \$8,234,125.91

* Date of transfer of Alberta's natural resources from federal to provincial control, and date also of the creation of the Department of Lands and Mines, Alberta, October 1st, 1930.

Permits for Domestic Use.—Permits to mine coal on Provincial lands by strip-mining methods for domestic use may be issued to actual settlers on payment of a fee of one dollar and royalty at the rate of ten cents a ton. Each permit expires on March 31st following its date of issue. During the year, 4 permits were issued authorizing an extraction of 66 tons, none of which could be bartered or sold.

QUARRYING

Five quarrying leases were issued and three renewed during the fiscal year for removing gravel from the bed of the North Saskatchewan River, one was issued and one renewed on the Oldman River. Three leases totalling 120 acres were renewed near Chisholm and one lease was issued on five acres near Hines Creek. Extraction of 482,491 cubic yards of sand and gravel and 358,240 tons of limestone and shale from Provincial lands were reported for the calendar year of 1948.

At the close of the fiscal year, 74 leases were active containing an area of 1,587 acres.

Permits.—Sand, stone and gravel permits are issued on the beds of rivers and lakes at a fee of \$2.50 and a royalty of five cents a cubic yard, and expire on the 30th day of November following the date of issue. In this fiscal year, 32 permits were issued for the extraction of 106,900 cubic yards.

DREDGING

No dredging leases were issued and the two issued the previous year on the McLeod River in the vicinity of Peers were cancelled.

QUARTZ

Fifteen new claims were recorded during the fiscal year. The claim in the Drumheller district for the recovery of bentonite was continued, and royalty of \$34.77 was paid representing 2½% of the value of the bentonite recovered.

The four quartz leases covering 181.8 acres issued by the Department of the Interior are still active.

PLACER

Two placer grants were issued during the year on the Athabaska River, one on the North Saskatchewan River and one on the Sand River.

SODIUM CHLORIDE (Common Salt)

This fiscal year the salt plant operated by Industrial Minerals Limited at Waterways, reported extraction of 23,712 tons of salt and the Alberta Salt Company Limited commenced production at its plant near Lindbergh in July, 1948, and produced 10,850 tons.

A summary appears showing the salt production by fiscal years.

SALT PRODUCTION

Fiscal Year	Tons Produced
1938-39	5,420
1939-40	2,508
1940-41	11,720
1941-42	19,916
1942-43	20,672
1943-44	17,425
1944-45	28,315
1945-46	29,206
1946-47	31,365
1947-48	29,166
1948-49	34,562

SPECIAL PERMITS

One annual permit for the collection of bitumen issuing from an old well in the Peace River district was again renewed. Collection of 632 gallons was reported during the year under review.

DRILLING STATISTICS

The drilling and production of petroleum and natural gas wells in the Province are administered by The Petroleum and Natural Gas Conservation Board, 514 Eleventh Avenue West, Calgary, Alberta, and particulars as to drilling activity, production and statistical data are included in weekly, monthly and annual reports issued by the Board.

SUMMARY OF OIL PRODUCTION IN ALBERTA BY CALENDAR YEARS
QUANTITIES IN BARRELS OF 35 IMPERIAL GALLONS

	Crude Oil	Turner Valley	Gassoline	Leduc	Redwater	Conrad	Taber	Princesse	Wainwright	Vermilion	Mloyd minister	Other Fields	Alberta Total	Valuation						
1914-24	69,722	30,501	8,351	7,283	5,864	4,818	3,358	2,403	1,734	1,715	1,715	1,715	1,715	1,715	1,715	1,715	1,715	1,715	1,715	1,715
1925	17,125	17,125	8,351	7,283	5,864	4,818	3,358	2,403	1,734	1,715	1,715	1,715	1,715	1,715	1,715	1,715	1,715	1,715	1,715	1,715
1926	20,634	20,634	7,283	5,864	4,818	3,358	2,403	1,734	1,715	1,715	1,715	1,715	1,715	1,715	1,715	1,715	1,715	1,715	1,715	1,715
1927	32,140	32,140	7,283	5,864	4,818	3,358	2,403	1,734	1,715	1,715	1,715	1,715	1,715	1,715	1,715	1,715	1,715	1,715	1,715	1,715
1928	48,158	48,158	7,283	5,864	4,818	3,358	2,403	1,734	1,715	1,715	1,715	1,715	1,715	1,715	1,715	1,715	1,715	1,715	1,715	1,715
1929	98,159	98,159	7,283	5,864	4,818	3,358	2,403	1,734	1,715	1,715	1,715	1,715	1,715	1,715	1,715	1,715	1,715	1,715	1,715	1,715
1930	136,599	136,599	7,283	5,864	4,818	3,358	2,403	1,734	1,715	1,715	1,715	1,715	1,715	1,715	1,715	1,715	1,715	1,715	1,715	1,715
1931	1,372,246	1,372,246	7,283	5,864	4,818	3,358	2,403	1,734	1,715	1,715	1,715	1,715	1,715	1,715	1,715	1,715	1,715	1,715	1,715	1,715
1932	790,610	790,610	7,283	5,864	4,818	3,358	2,403	1,734	1,715	1,715	1,715	1,715	1,715	1,715	1,715	1,715	1,715	1,715	1,715	1,715
1933	818,447	818,447	7,283	5,864	4,818	3,358	2,403	1,734	1,715	1,715	1,715	1,715	1,715	1,715	1,715	1,715	1,715	1,715	1,715	1,715
1934	730,334	730,334	496,631	496,631	496,631	496,631	496,631	496,631	496,631	496,631	496,631	496,631	496,631	496,631	496,631	496,631	496,631	496,631	496,631	496,631
1935	674,959	674,959	602,160	602,160	602,160	602,160	602,160	602,160	602,160	602,160	602,160	602,160	602,160	602,160	602,160	602,160	602,160	602,160	602,160	602,160
1936	2,109,559	2,109,559	657,169	657,169	657,169	657,169	657,169	657,169	657,169	657,169	657,169	657,169	657,169	657,169	657,169	657,169	657,169	657,169	657,169	657,169
1937	2,237,740	2,237,740	531,434	531,434	531,434	531,434	531,434	531,434	531,434	531,434	531,434	531,434	531,434	531,434	531,434	531,434	531,434	531,434	531,434	531,434
1938	6,155,744	6,155,744	2,96,757	2,96,757	2,96,757	2,96,757	2,96,757	2,96,757	2,96,757	2,96,757	2,96,757	2,96,757	2,96,757	2,96,757	2,96,757	2,96,757	2,96,757	2,96,757	2,96,757	2,96,757
1939	7,259,404	7,259,404	2,96,757	2,96,757	2,96,757	2,96,757	2,96,757	2,96,757	2,96,757	2,96,757	2,96,757	2,96,757	2,96,757	2,96,757	2,96,757	2,96,757	2,96,757	2,96,757	2,96,757	2,96,757
1940	8,180,356	8,180,356	2,74,172	2,74,172	2,74,172	2,74,172	2,74,172	2,74,172	2,74,172	2,74,172	2,74,172	2,74,172	2,74,172	2,74,172	2,74,172	2,74,172	2,74,172	2,74,172	2,74,172	2,74,172
1941	9,537,221	9,537,221	2,93,122	2,93,122	2,93,122	2,93,122	2,93,122	2,93,122	2,93,122	2,93,122	2,93,122	2,93,122	2,93,122	2,93,122	2,93,122	2,93,122	2,93,122	2,93,122	2,93,122	2,93,122
1942	9,701,719	9,701,719	302,216	302,216	302,216	302,216	302,216	302,216	302,216	302,216	302,216	302,216	302,216	302,216	302,216	302,216	302,216	302,216	302,216	302,216
1943	8,991,128	8,991,128	46,169	46,169	46,169	46,169	46,169	46,169	46,169	46,169	46,169	46,169	46,169	46,169	46,169	46,169	46,169	46,169	46,169	46,169
1944	7,878,128	7,878,128	448,166	448,166	448,166	448,166	448,166	448,166	448,166	448,166	448,166	448,166	448,166	448,166	448,166	448,166	448,166	448,166	448,166	448,166
1945	7,009,351	7,009,351	412,550	412,550	412,550	412,550	412,550	412,550	412,550	412,550	412,550	412,550	412,550	412,550	412,550	412,550	412,550	412,550	412,550	412,550
1946	5,937,662	434,210	206,926	206,926	206,926	206,926	206,926	206,926	206,926	206,926	206,926	206,926	206,926	206,926	206,926	206,926	206,926	206,926	206,926	206,926
1947	5,022,340	424,245	372,427	372,427	372,427	372,427	372,427	372,427	372,427	372,427	372,427	372,427	372,427	372,427	372,427	372,427	372,427	372,427	372,427	372,427
1948	4,432,044	468,655	4,657,371	36,875	179,627	201,527	186,393	11,131	11,131	11,131	11,131	11,131	11,131	11,131	11,131	11,131	11,131	11,131	11,131	11,131
TOTAL	91,098,287	6,758,620	5,029,798	36,875	763,630	1,046,898	466,378	273,595	1,090,786	485,766	108,108,571	485,766	108,108,571	\$204,957,907						

NOTE: The dividing line between oil wells and gas wells is now on the basis of the gas/oil ratio of 30 Mcf. per barrel. Commencing with 1946 no division is being made in limestone production between oil and gas wells.

† Valuations are based on sales by primary producers.

Technical Division

Report of the Superintendent of the Technical Division

T. W. Dalkin

In October, 1930, a small group of people, some transferred from the Dominion Civil Service and some from the Provincial Civil Service, were given temporary desk space on the upper floor of the Land Titles Office in Edmonton because on October 1st, 1930, the Dominion Government no longer controlled the resources of the Province of Alberta. These civil servants with the agency staffs throughout the Province continued to dispose of the lands and minerals according to the terms of the federal legislation in force at that time.

This period, as quoted from the first annual report of the Department of Lands and Mines, "demanded not only a continuance of administration, free from complications or confusion, of the various divisions of the Department, but also the installing of an efficient system, which would be suitable and necessary for the new Provincial Control."

To do this it was necessary to bring a man from Ottawa to direct affairs. It was essential that he be a man of broad experience, unusually well versed in Government procedure and law and who knew "all the answers." That man was Mr. John Harvie, who with tireless energy and a keen insight into the requirements of the future became the first Deputy Minister of Lands and Mines and also as history records the last Deputy Minister of this Department.

Today in 1949 the big and sprawling Department of Lands and Mines, whose administration reaches into every nook and corner of the Province, with its soaring and what are considered even today, almost startling revenues, stands as a tribute, as to how well he succeeded by his sound judgment and wise counsel with his Ministers, under whom he served since the inception of the Department of Lands and Mines down through the years to March 31st, 1949, when by legislation enacted, the Department of Lands and Mines passed out of existence to be replaced by two new Departments, the Department of Lands and Forests and the Department of Mines and Minerals.

This report, therefore, ending March 31st, 1949, is the last one issued by the Department of Lands and Mines.

There seems to be no abatement in the demand for the natural resources administered by the different Branches of the Department and this is reflected in the general activity of the Technical Division.

A greater acreage of land under various classifications was patented in the amount of 136,568.7089 acres, more or less, as against 129,374.829 acres, more or less, for the previous year.

Particulars of the various classifications and number of notifications are as follows:

Classifications	Notifications (Number)	Area (Acres)
Homesteads	261	40,495.08
Sales (Including Lots in Subdivisions)	182	12,023.144
Second Homesteads	12	1,921.10
Soldier Entries	4	629.95
Special Grants	14	47,474.91
Revival of Titles	2	320.00
Exchange of Lands	25	12,850.18
Certificate of Tax Sale Redemption	1	320.00
Pre-emption	1	160.00
School Land Sales (Including Lots in Subdivisions)	128	20,048.3449
Release of Habendum	2	6.00
Homestead Sale	2	320.00
	634	136,568.7089
X Walter S. Campbell	1	
Total	635	

X This notification covers all
petroleum and natural gas rights.

**DETAILS OF SALES IN SUBDIVISIONS WHICH ARE INCLUDED
IN THE 182 NOTIFICATIONS REFERRED TO ABOVE**

	Notifications	No. of Lots	No. of Blocks
Bindloss—7142 A.W.	1	2	1
Canmore—39 Gen.	28	41	10
Coleman—6808 C.U.	3	5	3
Donnelly—204 C.L.	4	7	1
Enchant—438 B.D.	3	4	1
Fishburn—3156 R.	2	4	2
Grandview—1109 B.F.	4	8	2
Jarvie—37 Gen.	3	4	2
Manyberries—7345 B.O.	2	2	2
Maple Leaf—7242 A.I.	1	1	1
Monitor—3708 A.P.	7	8	2
McMurray Settlement— 5072 E.T. (River View)	1	4	1
McMurray Settlement—7518 A.K.	1	2	1
Naco—2537 D.N.	1	1	1
Oyen—(Swenson Addition)—3732 C.D.	1	1	1
Retlaw—7285 A.Q.	1	1	1
Sunnybrook—4045 C.O.	4	6	4
Sibbald—3569 B.N.	1	1	1
Travers—927 A.Y.	4	11	2
	67	113	39

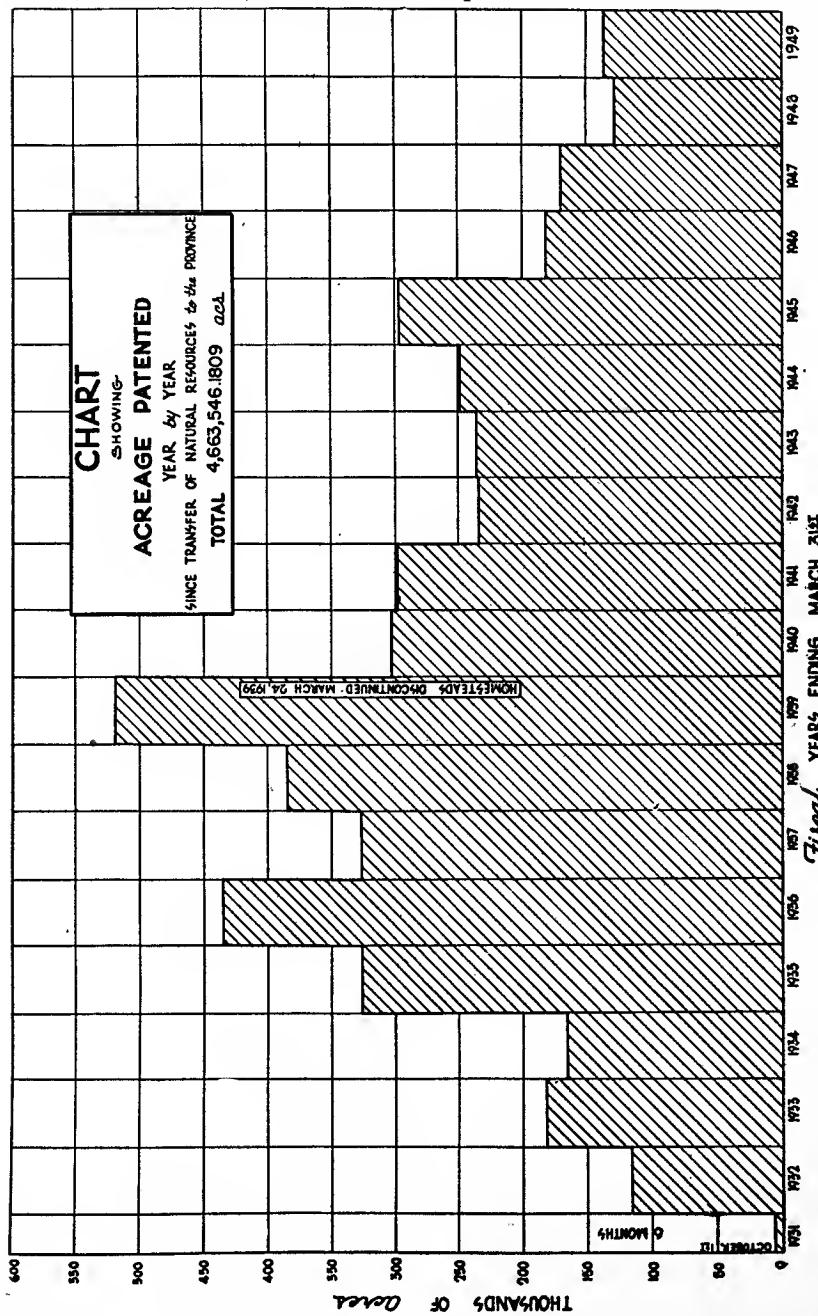
**SUBDIVISIONS INCLUDED IN THE 128 NOTIFICATIONS ISSUED
UNDER SCHOOL LAND SALES**

	Notifications	No. of Lots	No. of Blocks
McLennan Townsite—1394 E.U.	2	3	2

**TOTAL NUMBER OF NOTIFICATIONS ISSUED COVERING
LOTS AND BLOCKS IN SUBDIVISION**

Sales	67
Sales, School Land	2
	—
Total	69
Total No. of Notifications issued giving area	565
Exchange of Minerals	1
	—
Total	635

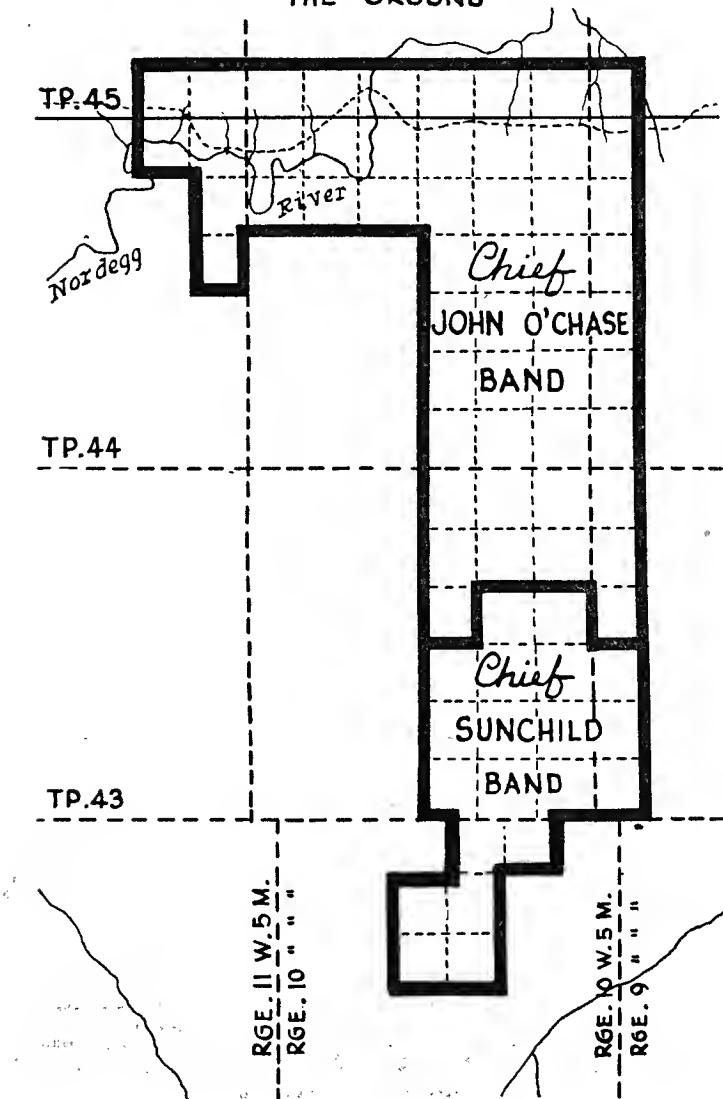
A grand total of 4,663,546.1809 acres, more or less, have now been patented by the Province whilst 3,714,184.76 acres, more or less, have been returned to the Province through revestment or tax recovery proceedings and of this area 2,505,094.074 acres, more or less, lie within the Special Areas and 1,209,090.69 acres, more or less, lie outside the Special Areas.



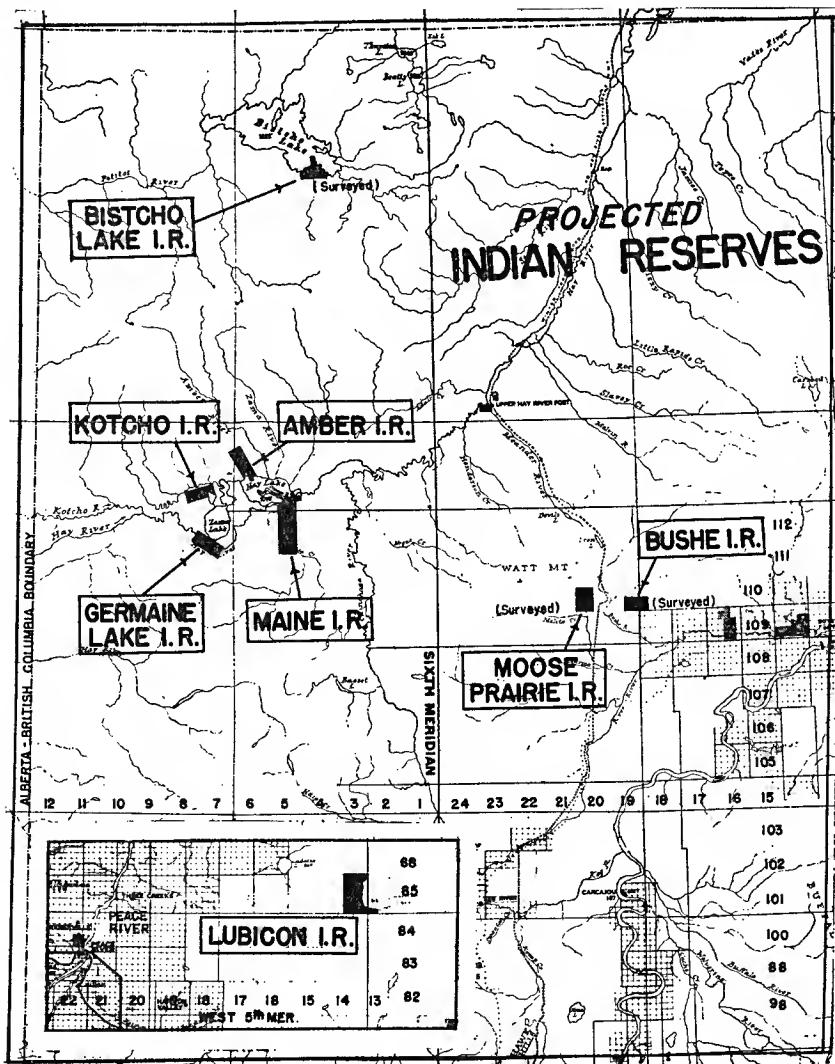
Notifications designated above as special grants include two new Indian reservations to which reference was made in last year's report.

These reservations are for the Sunchild and O'Chiese Indian bands and are located north-west of Rocky Mountain House on

PLAN
Showing
**LANDS SET ASIDE FOR PROPOSED INDIAN
RESERVES SUBJECT TO A SURVEY UPON
THE GROUND**



the Baptiste and Nordegg Rivers and south and west of where the Brazeau River joins the North Saskatchewan River. These special grants convey the minerals as well as the surface rights over an area of approximately 47,200 acres.



Whilst on the subject of Indian reservations it should be reported that some years ago representations were made on behalf of the Upper Hay River bands of Indians in Northern Alberta for additional lands. Certain lands have been provisionally selected but so far only the Bushe River Indian reserve No. 207 and the Moose Prairie Indian reserve No. 208 have been surveyed and the question of granting patent to the surface and

the mineral within the limits of these reserves will be given attention in the forthcoming year.

Included in this report is a key plan showing the approximate locations of these proposed reserves, but no further action can be taken until the surveys have been made by the Dominion Government.

Provisional reservations have, however, been entered in our records.

It should also be noted that there is a proposed reserve lying to the east of Peace River adjoining the west boundary of Lubicon Lake, as yet unsurveyed.

In addition another reserve has been surveyed for the Wabiskaw band of Indians adjoining South Wabiskaw Lake in the vicinity of Townships 79 and 80, Ranges 25 and 26, West of the 4th Meridian. The question of granting title for this particular reserve is now receiving the attention of the Department.

TAX RECOVERY AND REVESTED LANDS

INSIDE SPECIAL AREAS	As on March 31,	From April 1, 1948,	Total to June
	1948	to June 1, 1948	1, 1948
	Acres	Acres	Acres
Tax Recovery	2,363,061.355	3,557.47	2,366,418.825
Revested	179,829.77	4,505.71	184,335.48
Total	2,542,891.125	7,863.18	2,550,754.30
<hr/>			
OUTSIDE SPECIAL AREAS	As on March 31, 1948	From April 1, 1948, to March 31, 1949	Total to March 31, 1949
	Acres	Acres	Acres
Tax Recovery	767,105.63	22,017.16	789,122.79
Revested	445,769.77	21,306.13	467,075.90
Total	1,212,875.40	43,323.29	1,256,198.69

SPECIAL AREAS

On May 12th, 1948, an Order in Council was passed whereby the Department of Municipal Affairs would be responsible for the administration of all lands in these areas as from June 1st, 1948. However, as a matter of convenience to the Department of Municipal Affairs, this Division continued to carry through certain transactions that were pending, such as the exchanges of lands, particulars of which are as follows:

EXCHANGES OF LAND COMPLETED AND NOTIFICATIONS ISSUED

Name	Land to Crown	Land to Applicant	O.C. and Date	Date Notification Issued
Anderson, M. C.	W 1/2 27-34-5-W4	N 1/2 31-32-5-W4	556/47	3/6/47
Brown, Albert E.	E 1/2 3 N.W. 1/4 2 31-5-W4	W 1/2 7 S.E. 1/4 12 28-4-W4	8/47	7/1/47
Blue, Alex	S.E. 1/4 27-32-2-W4	S.W. 1/4 13-32-2-W4	309/47	3/4/47
Christianson, Arthur	S.E. 1/4 32-32-4-W4	N.W. 1/4 32-30-5-W4	556/47	3/6/47
Dornan, Annie M.	S.W. 1/4 19-25-14-4	N.W. 1/4 33-25-14-W4	1380/43	1/7/349 Not. Comp.
Huff, Leonard	N.W. 1/4 4-17-17-4	S.E. 1/4 19-16-19-4	309/47	3/4/47
Howe, Cuthbert B.	Fr. N. 1/2, N.E. 1/4 36, 22-7-4	S.W. 1/4 15, S.E. 1/4 16, Fr. N.W. 1/4 10-22-6-4	580/47	2/2/10/48
McKinnon, C. H.	Sec. 8 S. 1/2 & N.W. 1/4 26-18-19-W4th	Sec. 17, 18, 19, 19-18-4	1169/47	10/11/47
Oster, Jacob	S. 1/2 12 & 13-19-18-4 S. 1/2 24-19-18-4	N.W. 1/4 5-33-9-4	411/47	29/4/47
Rubusky, Alex	SE 1/4 21-33-8-4 N.W. 1/4 13-32-10-4	N.W. 1/4 30-34-10-4	411/47	29/4/47
Standing, G. C.	E 1/2 22-33-13-4	N.W. 1/4 15-33-13-4 S.W. 1/4 22-33-13-4	411/47	15/3/49
Thullen, Thomas	N.W. 1/4 33-33-8-4	N.W. 1/4 9-34-8-4	176/47	18/2/47
				25/11/48

EXCHANGES OF LAND COMPLETED OUTSIDE SPECIAL AREAS

Name	Land to Crown	Land to Applicant	O.C. and Date	Date Notification Issued
Holuska, A.	N.W. 1/4 2-48-5-5	S.W. 1/4 1-48-5-5	1805/45	15/11/45
Estate of Laidlaw, Lorne, N.	S.W. 1/4 18-19-1-5	E. 1/2 19 S. 1/2 20 Sec. 29, E. 1/2 & S. W. 1/4	1019/47	30/ 9/47
	Sec. 8, N.W. 1/4 23, S.E. 1/4	30, W. 1/2 31-13-11-4		9/ 7/48
	26, W. 1/2 26, S. & E. of River, 19-2-4	W. 1/2 22, N. 1/2 15, E. 1/2 22, N. & W. of River		
Radke, R.	S.E. 1/4 19-12-7-4	N.E. 1/4 16-12-7-4	1805/45	15/11/45
	Sec. 6, 1, W. 1/2 22, 14-20-4	N.E. 1/4 16-12-7-4		9/ 4/48
P. Burns Ranches Ltd.	Sec. 21, W. 1/2 22- 14-29-4	E. 1/2 13-29-4 N.W. 1/4 6-14-29-4 S. 1/2 & N.W. 1/4 12-14-30-4	784/48	8/ 7/48
Hudson's Bay	Certain Lands in 7-8- 2-6	Certain Lands in 81-21-5 81-22-5	1127/48	28/ 9/48
	7-8- 3-6 5-0- 6-4 2-1- 7-4 2-1- 7-4 2-1- 4-4 1-8-10-4 1-9-10-4	77- 1-6 78- 1-6 86- 7-6 87- 8-6		17/11/48

EXCHANGES OF LAND OUTSIDE SPECIAL AREAS PENDING
ONE YEAR'S RESIDENCE

Name	Land to Crown	Land to Applicant	O.C. and Date	Expiry Date of Res. Clause
Bochni, A. J.	N.E. 1/4 9-73-17-5	N.W. 1/4 3-74-17-5	1805/45	15/11/45
Sommer, Mrs. W.	N.E. 1/4 2-1-13-4-4	N.E. 1/4 13-14-3-4	1805/45	15/11/45
Steinh, G.	W. 1/4 1-13-4-4	N.W. 1/4 12-13-4-4	1805/45	15/11/45
McCall, J.	N.E. 1/4 14-4-3-4	N.E. 1/4 22-4-3-4	1805/45	15/11/45
Schwara, Max	N.E. 1/4 4-10-22-4	N.E. 1/4 17-6-22-4	1805/45	15/11/45
Nelson, P. W.	S.E. 1/4 25-57-2-4	N.E. 1/4 17-54-4-4	1282/48	2/11/48
				On registration of transfer.

The relentless search for oil is dominant and more companies than ever before have applied for rights of entry onto Crown lands under the Arbitration Board. Close contact and co-operation is kept with the Board and all plans of survey are checked by this Division so that they will meet our requirements, before acceptance by that Board.

Licenses of occupation are on the increase for power transmission lines as is evidenced by the activities of the major power companies in our Province and even the broad Saskatchewan River cannot stop the march of progress for pipelines were laid across its bed and oil began to flow towards the wheels of industry in record time.

Plans of survey were also checked in order to grant rights for reservoir sites, drainage ditches, wharf sites and hauling roads.

LOGGING ROADS

It is not so long ago that lumber companies created a pattern of trails throughout the open spaces of our Province for the development of their timber berths in order to connect with transportation and so bring the lumber to the markets. With the rapid settlement on the land, due in a great measure by the Veterans of World War II and also the civilians, these open spaces are disappearing so that it was necessary a few years ago to inaugurate a policy whereby all lumber companies using Crown lands for the development of the timber berths must apply for a license of occupation, the rental for which is only nominal.

These roads can only be regarded as temporary until the lumber from the timber berths has been exhausted and under the circumstances the departmental requirements were cut down to a minimum. Due to the difficulty of obtaining the services of surveyors and the temporary nature of the roadway it was decided that the Department would not insist upon a survey but would accept a plan from the operators showing the approximate location of the logging road. Occasionally difficulties are encountered particularly when the logging roads of different companies are in close proximity and it has been known that whilst the plans submitted by different companies showed different locations of the logging roads, actually upon the ground only one logging road exists. There is no doubt that lumber companies have for some time been using the Crown lands without establishing any rights to the logging roads and it is only in some cases when other lumber companies appear on the scene that application is made to establish rights on the logging roads.

In order that this Division may have a true picture of the situation, plans are now being prepared showing all the logging roads for which licenses of occupation have issued. These will be eventually forwarded to the Forestry Branch so that information can be obtained on the ground by the fieldmen of any operations that are being conducted over lands for which no permission has been granted by this Department. In this way it is

hoped that this Division can set up a complete set of records regarding this particular activity.

The demand for lumber still continues and licenses of occupation have been issued for many logging roads to timber berths located in various parts of the Province.

FORMER BUFFALO NATIONAL PARK

Reference was made in last year's report that owing to the fact that this park at Wainwright was no longer necessary for the preservation for buffalo it was abolished. Due to the fact that the Dominion Government held title to certain areas within the original park boundaries it was necessary to negotiate with Ottawa and it now can be reported that the Province has secured title to these lands. At the present time the Department of National Defence's requirements are being given consideration and plans and descriptions have been prepared as a basis of negotiation to lease certain additional areas of this former park for military purposes.

NEW SURVEYS

Addition to Willingdon Townsite

In 1947 the officials of the Village of Willingdon appointed a surveyor to survey and execute plans of an addition to this townsite on account of the increasing demand for land at this location. When the surveyor presented the plans for approval it was pointed out to him by this Division that the Village of Willingdon did not own the land and had no authority to give instructions for such a survey. Under the circumstances it was necessary for this Department to take over the survey commenced by the Village, but owing to the fact that the Village survey incorporated into the subdivision land belonging to a private individual, who refused to have his land form part of the survey, it was necessary to redesign the system of the survey. This has now been accomplished and the plans of survey registered in the Land Titles Office under No. 1329 H.W. The lots shown upon this new subdivision plan are now available to the public.

Incorporated on this new subdivision plan was also a large recreational area for community purposes, an area comprising 10 acres for an addition to the existing school site and other valuable parcels of land in the form of acreage.

Twp. 77-24 W. 5th Mer.

As the Department of Public Works' surveyors were in this locality on roadway surveys we were fortunate enough to get surveyed certain sections in this partially surveyed township. This township is broken by the Smoky River and it was necessary to traverse the westerly boundary of this River. The latest report was that the plan of surveys was in course of preparation.

Drumheller

There has been in existence for many years a most undesirable squatter situation which seems to grow worse as the years go by and which will become even more difficult to even try to get any semblance of orderliness that will comply with good town planning if and when the services of an Alberta Land Surveyor becomes available. The next best thing that could be attempted was to have an official of this Division proceed to Drumheller

and make a survey of the situation as it exists upon the ground. A somewhat exhaustive survey was made and plans prepared showing the locations and zig zag fences that have been erected. With these plans was prepared an exhaustive report giving the names of the squatters, the areas of the land, and how the land was being utilized. Most of the land was being used for residential purposes and some for commercial purposes whilst it was revealed that absentee landlords were also reported. With this information it is hoped that a temporary expedient will be reached whereby all squatters will be approached to take out permits upon this Crown land and pay a rental commensurate with the areas of the land and the purposes for which it is being used.

The areas surveyed are the

E. $\frac{1}{2}$, 10-29-20 W. 4th Meridian (Newcastle)

N.W. $\frac{1}{4}$ and S. $\frac{1}{2}$, 28-27-18 W. 4th Meridian

L.S.'s 8, 9, 10, Sec. 29-27-18 W. 4th Meridian (East Coulee)

At the latter point most of the squatters have built their homes on what is shown upon registered plan as River Drive. These squatters should never have been allowed to build on what is a public roadway and as East Coulee is a hamlet under the circumstances this situation was drawn to the attention of the Department of Municipal Affairs.

Squatters at Philomena, Twp. 71, Rge. 1, W. 4th Mer.

Another bad squatter situation still exists at the above location and on account of the comparatively few registered Alberta Land Surveyors, all of whom have more work than they can cope with, there is nothing that can be done to remedy this situation at the present time.

The demand for land is very much in evidence especially for the unsurveyed areas in the Peace River country. Until these areas and other lands throughout the Province are surveyed it is most unfortunate that further settlement upon these lands by a fine type of Albertan will be retarded.

It should be recorded, however, that very determined efforts have been made to obtain surveyors, whose services seem to have been absorbed by the major oil companies of this continent to make the necessary surveys in the relentless search for oil. So it seems that while exploration is in the ascendancy, the Department cannot lure surveyors out into the wide, but not open spaces, to survey tracts of land for new settlement.

ROADWAYS

This year only 19 plans of survey of road diversions were received from the Department of Public Works and which plans affected 53 quarter sections of Crown land.

MINERAL RECORDS

In anticipating the creation of the new Department of Mines and Minerals a very determined effort was made by the Technical Division on the township plans showing the freehold and Crown minerals. It is very gratifying to report that 779 Townships were completed, and this constitutes a record number for any one year. There is no doubt that this record is in a measure also due to the unprecedented demand for reservations by the oil companies.

NEW MAPS

Redwater

A new map of the Redwater Oil Field was designed and published, and this along with some very creditable maps of other fields and records will form a good foundation for the new Department of Mines and Minerals.

8-Mile Map of the Province

Reference was made last year to the delays and disappointments in the publication of our 8-mile map of the province. It was necessary for an official of this Department to visit Winnipeg in order to clear up certain technical difficulties and corrections with our lithographers. This expedited the publication of the map and 2,225 copies arrived in April of this fiscal year.

It is acknowledged a very fine map and due to its large size is published in four sections, namely the Northeast, Southeast, Northwest and Southwest quarters of the Province. Each section sells for 50c or a total of \$2.00 for the full map. If mounted the current price for the map is \$8.50.

The map is printed on a white background with all the section and township lines shown in light blue. The township and range numbers are in red as are also all the main highways. All the railways are shown in black, as well as all cities, towns, villages, hamlets and post offices.

In addition to the foregoing the map also shows the Forest Reserves, National Parks, Indian Reserves, irrigation canals, locations of ferries, Hudson's Bay Company posts, settlements, radio stations in Forest Reserves, commercial radio stations, principal airports, Provincial Parks, elevations in feet above sea level and Dominion Government telegraph lines. A map was published by this Division last year which showed the Provincial land withheld from settlement, particularly those lands unsuitable for agricultural purposes. During the course of the year it was found necessary to revise the boundaries in certain areas and under authority of O.C. 497/49 the plan was revised.

35-Mile Map of the Province

The 35-mile map of the Province has been a very useful and economical publication. This map was produced in connection with the Surveyor-General's Department of the Department of Mines and Resources, Ottawa. As our stocks of this map were depleted it was found necessary to revise it and bring it up to date. Again through the kind co-operation of the Surveyor-General's Department 5,000 copies of this very fine map have been received. It measures approximately 16" x 24" and sells for only 15c.

DOMINION GOVERNMENT PUBLICATIONS

This Department continues to collaborate with the Dominion Government so that all proofs are checked of all new publications and revised additions in order to bring them right up to date. At the present time the Ottawa presses are going at full speed and still are unable to keep us supplied with revised publications of the maps that are out of print. There are quite a number that are not available and as the lack of these publications is causing us a certain amount of embarrassment in

not meeting the requests of the oil companies this unfortunate situation is being discussed with Ottawa. The particular publications that are out of print are known as "sectional sheet maps", which are drawn upon a scale of 3 miles to the inch. Some of these maps are being reprinted but as Ottawa is issuing a very fine series of new topographical maps to take the place of these sheet maps it is debatable with Ottawa whether to re-issue these publications that are out of print or proceed to issue the new topographical series in lieu thereof.

The demand for our maps is still on the increase due to the acceleration of the exploration of our oil resources.

Requests for our maps are received from many places outside of Canada, and it is gratifying to report that many letters and also verbal compliments have been received from the officials of the oil companies expressing surprise at the general high quality of our maps.

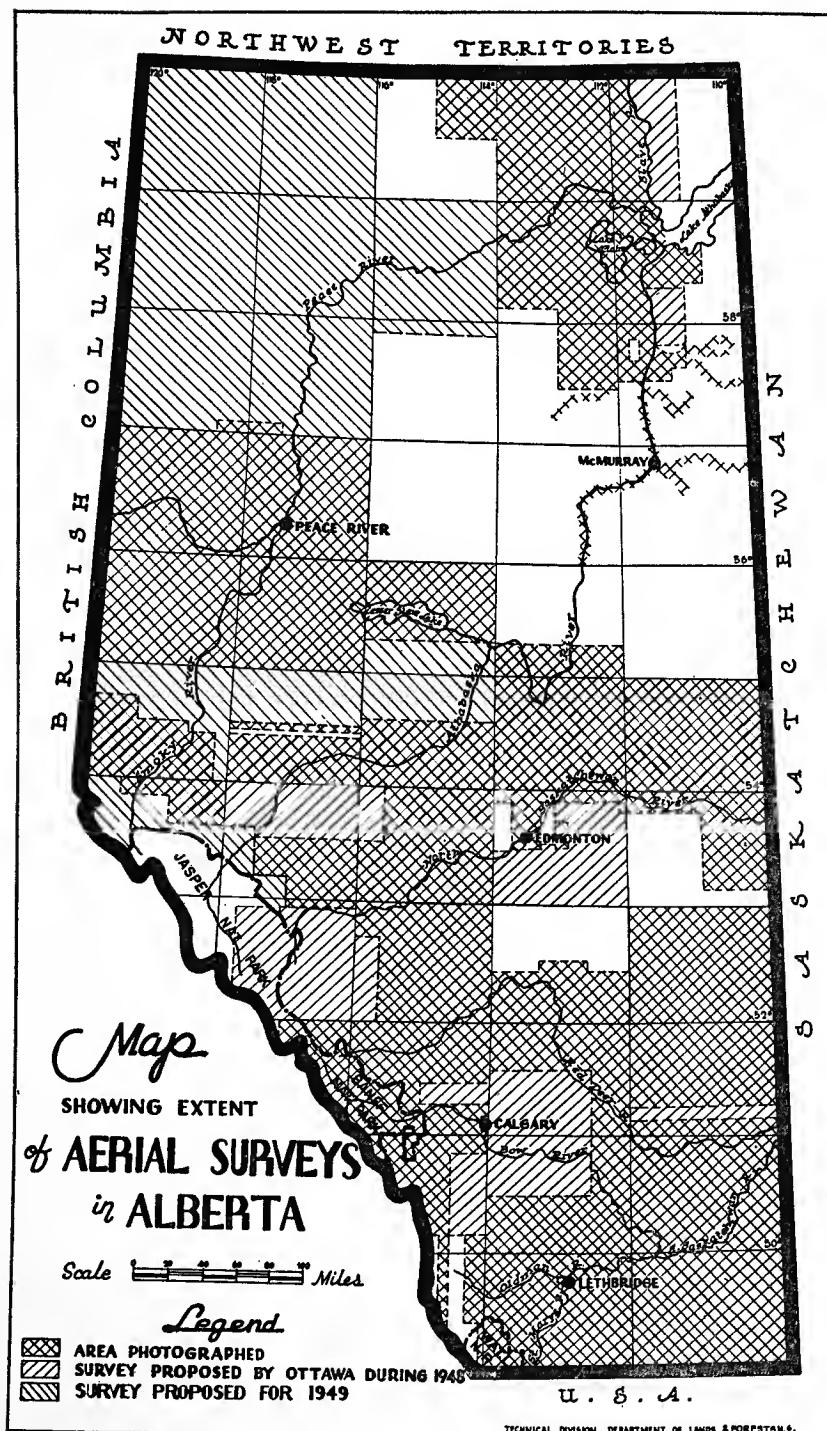
A type of map that is now greatly in demand is our series of township maps drawn upon a scale of 40 chains to the inch. Large quantities of these maps have been sold, particularly to the oil companies, who find them of great use in exploring the surveyed portions of the Province. A number of these township plans are now out of print and as this report is being written discussions are proceeding with Ottawa in order to ascertain if a reissue of these out-of-print maps can be obtained. In the meantime, the situation is being met by photostating the plans that are not in print.

AERIAL SURVEYS

From time to time this Division has made reference to aerial surveys and advocated the setting up of an air photography library in order to meet the increasing demand for more and more information regarding our Province. To a certain extent Ottawa can supply this information, but exploration is now reaching out to uncharted areas to such an extent that serious consideration should be given to the adoption of these modern methods of rapid survey and make the information by photograph and the plans compiled therefrom available to all for the general development and welfare of our Province.

In this report is a map showing:

1. Areas that have been photographed.
2. Ottawa's program for 1948.
3. Proposed aerial program for 1949.



GENERAL DRAUGHTING AND LEGAL DESCRIPTIONS

There is a steady flow of this class of work passing through the Division which at times is difficult to absorb due to the fact that there appears to be no available experienced draughtsmen which we can obtain to supplement our present staff, and it would seem that they must have been lured away by the oil companies that have invaded our Province.

Juniors are being trained, but this is a slow process when the work requires draughtsmen of experience. It is to be hoped that the situation will be remedied in the not too distant future. In the meantime we are thankful for our photostat machine, which whilst it cannot be looked upon quite as a draughtsman it nevertheless enables this Division to cut down on a great deal of tedious draughting.

Work from all Departments is put through this machine, which although taxed to the limit at times by employing extra shifts, it still nevertheless is able to cope with government requirements.

Our mimeograph machine, which is the part-time duty of one of our girls, continues to meet all requirements.

MINERAL TAXATION

With the discovery of Imperial Oil Limited No. 1 Well in the Redwater area and which was brought into production on the 26th of October, 1948, and the bringing into production of wildcat wells, the taxation fields and producing areas continue to expand and the revenues from this source continue to climb.

Under the Mineral Taxation Act there are two kinds of taxes, one for the producing areas and one for the non-producing areas, or as it is sometimes known as the acreage tax.

A glance at the revenue set out hereunder would show that since the inception of the Mineral Taxation Act in 1941 there has been a steady climb almost every year in both sets of taxes, with the revenues from the non-producing areas being greater in each respective year than the revenues from the producing areas:

Year	Producing Area	Non-Producing Area	Total
1941	\$ 24,532.61	\$ 50,588.32	\$ 75,120.93
1942	27,463.60	66,901.08	94,364.68
1943	40,308.01	61,767.14	102,075.15
1944	31,255.85	61,527.44	92,783.29
1945 (Arrears 1944) ...	71.80	160,054.33	160,126.13
1946	125,742.91	231,062.93	356,805.84
1947	179,694.16	294,039.82	473,733.98
1948	290,170.08	275,773.89	565,943.97
			\$1,920,953.97

This year, however, is an exception and for the first time the revenue from the producing area is greater than the revenue from the non-producing area and for the first time the total amount of the combined taxes exceed over half a million dollars.

Mineral Tax Certificate fees amounting to \$125.50 were received during the fiscal year, but not included in the above table.

At the Session just concluded, certain amendments were made to the Mineral Taxation Act of 1947 in order to simplify the procedure whereby the Crown may acquire minerals for

non-payment of taxes. At the previous Session to the last one, the Act was revised whereby it was necessary to notify, by registered mail, all encumbrances that appeared upon the title covering the minerals, the taxes for which were in default. This procedure is now no longer necessary and whilst the delinquent registered owner is notified by registered mail, complete details, including the name of the registered owner, the location of the minerals and the type of minerals must appear in the Alberta Gazette before the Crown can proceed to take title to minerals for non-payment of taxes. Under the Mineral Taxation Act of 1947 the Crown can acquire minerals under two procedures:

- (a) By voluntary transfer to the Crown by the registered owner.
- (b) For non-payment of taxes.

Hereunder are details of the type of all minerals and the areas that have been vested in the Crown through the above procedures up to the present time:

LIST OF MINERALS OBTAINED THROUGH VOLUNTARY TRANSFER AND NON -PAYMENT OF MINERAL TAX

VOLUNTARY TRANSFER		All Coal	All Mines and Minerals	All Minerals Except Coal and Petroleum	All Minerals Except Coal, Petroleum and Valuable Stone	All Minerals Except Coal, Natural Gas and Petroleum	All Mines and Minerals Except Coal	All Mines and Minerals Except Gas and Oil	Coal and Valuable Stone	All Mines and Minerals Except Petroleum and Natural Gas	All Minerals Except Gas	All Gas	All Minerals Except Oil and Gas	All Minerals Except Coal and Petroleum and Also Excepting All Mines and Mineral Oil	All Minerals Except Gold and Silver	All Minerals Except Gold, Silver and Coal	All Petroleum and Natural Gas	All Minerals Except Oil, Petroleum and Natural Gas	Minerals Within Meaning Mining Regulations But Reserving Coal and Placer Mines
		Area	Area	Area	Area	Area	Area	Area	Area	Area	Area	Area	Area	Area	Area	Area	Area	Area	
From 1945 to Dec. 31/47		3,850.35	13,190.635	13,256.24	480.00	19,167.26	160.00	.....	160.00	.....	.....	.....	.....	.....	.....	.....	.....	.....
From Jan. 1st/48 to March 31/48		1,557.62	1,280.00	.....	294.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
From April 1st/48 to March 31/49	698,831.90	5.20	6,600.560	7,386.09	640.00	.....	.....	5,422.90	160.00	.....	.....	.....	.....	.....	.....	51.5	.....	.....
TOTAL	698,831.90	3,855.55	21,348.815	21,922.33	1,120.00	19,461.26	160.00	5,422.90	320.00	.....	.....	.....	.....	.....	51.5	.....	.....
NON-PAYMENT OF MINERAL TAX																			
To March 31/48	793.85	318.02	1,117.00	.....	4,194.10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
From April 1st/48 to March 31/49	1,431.35	13,411.241	71,258.03	61,880.642	785.00	34,122.6427	481.00	.....	1,280.00	1,280.00	820.00	322.00	4,200.58	80.00	480.00	160.00	162.63	
TOTAL	1,431.35	14,205.091	71,576.05	62,997.642	785.00	38,316.7427	481.00	.....	1,280.00	1,280.00	320.00	322.00	4,200.58	80.00	480.00	160.00	162.63	
Total Voluntary and Non-Payment to March 31/49	700,263.25	18,060.641	92,924.865	84,919.972	1,905.00	57,778.0027	641.00	5,422.90	320.00	1,280.00	1,280.00	320.00	322.00	4,200.58	80.00	531.5	160.00	162.63	

The most impressive set of figures in the list of minerals obtained through voluntary transfer can be found under the heading of "All Coal" from April 1st, 1948, to March 31st, 1949. This covers an area of 698,831.90 acres which were transferred voluntarily to the Crown by the Canadian Pacific Railway Company on the presumption of course, that there was little or no coal of commercial value underlying the various lands so transferred.

UNEARNED INCREMENT TAX

The revenue from this source still continues to climb and an examination of the details which appear hereunder of the taxes received shows that the revenues from the assignments of the petroleum and natural gas leases and the assignments of the cultivation and grazing leases were almost the same. It will be noticed that no taxes were collected on a large proportion of the petroleum and natural gas lease assignments possibly due to the fact that employees of the various oil companies acted as agents, which necessitated the assignment of the leases to the companies for no consideration. Nevertheless, the revenue from the assignment of such leases shows a considerable increase over last year.

Similarly, there was a large increase in revenue over last year from the assignments of cultivation and grazing leases, which was due to the assignments of leases by large ranching interests in full or in part to new ranchers and to ranchers wishing to acquire larger holdings to accommodate the increase in their herds.

	Number Assigned Without Tax	Number Assigned With Tax	\$	Tax Received	Number Assigned With Royalty Agreement	Number Assigned With Shares
Coal Mining Leases	33	8	\$ 217.24		1	1
P.N.G. Reservation	9	2	251.00			
Quarrying Leases .....	...	2	615.00			
P.N.G. Leases	239	271	20,118.98		139	5
School Land Cultivation & Grazing Leases	17	39	978.05			
School Land Sales	11	4	109.43			
School Land Grazing Permits	28	13	208.38			
School Land Miscellaneous Leases	1	1	7.00			
	Number Assigned Without Tax	Number Assigned With Tax	\$	Tax Received	Number Assigned With Royalty Agreement	Number Assigned With Shares
School Land Cultivation Permit	1	...				
Grazing Permits	22	11	\$ 170.92			
Sales .....	...	2	90.12			
Miscellaneous Leases	4	6	98.45			
Cultivation Permits	2	6	76.46			
Cultivation and Grazing Leases	17	23	413.04			
Grazing Leases	44	149	19,957.26			
Timber	25	5	93.76			
Surface Rights	2	...				
Agricultural Leases	2	2	86.80			
	457	550	\$ 43,491.89	.	140	5

ASSIGNMENTS REGISTERED

Nil Assignments	457
Cash Assignments	550
Assignments Registered by Royalty Agreement	140
Assignments Registered Through Payment of Shares	5
 Total Assignments Registered	 1,152
 Cash Payments on Registered Assignments	 \$43,491.89
Deferred Payments Made on Registered Assignments	2,480.13
 Total Tax Received	 \$45,972.02

Accounting Division

REPORT OF THE ACTING SECRETARY-ACCOUNTANT A. McCALLUM

A surplus of \$15,775,044.95 on Income Account was shown for the fiscal year ending March 31st, 1949, as compared with \$3,681,496.80 for the previous year, an increase of \$12,093,548.15.

Net Revenue amounted to \$17,360,429.11, an increase of \$12,309,691.72. Main increases and decreases were as follows:—

	Increase	Decrease
Game Act:		
Game Licenses	\$ 20,696.03	\$
Fur Tax	33,391.76	
Lands and Grazing:		
Homestead Leases, Fees, etc.	12,771.04	
Cultivation Permits, fees, rent, etc.	14,220.10	
Land Patent, Miscellaneous		15,630.07
MINERAL TAXATION ACT:	92,234.49	
Mining Lands:		
Coal Fees, Rent, etc.	56,267.39	
Coal Royalty	338,869.57	
Petroleum and Natural Gas Fees, Rent, etc.	1,443,059.35	
Petroleum and Natural Gas Royalty	854,094.33	
Purchase Price for Leases	8,720,507.01	
Mining Miscellaneous	17,229.05	
School Lands:		
School Land Sales Interest		11,055.31
School Land Cultivation Permits, Fees, etc.	111,474.61	
School Land Coal Royalty	19,454.63	
School Land Petroleum and Natural Gas Fees, Rent, etc.	151,552.39	
School Land Petroleum & Natural Gas Royalty	24,239.80	
School Land Purchase Price for Lease	191,296.50	
Timber:		
Timber Permits, Fees, Dues, etc.	100,858.39	
UNEARNED INCREMENT TAX:	28,144.69	
REVENUE FROM SURFACE RIGHTS ON EAST SLOPE RESERVES:	131,679.39	
MISCELLANEOUS:		25,663.42
NET REVENUE INCREASE:		12,309,691.72
	<hr/> \$12,362,040.52	<hr/> \$12,362,040.52

Gross Receipts from all sources amounted to \$24,491,345.78, as against \$7,752,823.80, for the fiscal year 1947-48.

Expenditure on Income Account for the year under review, amounted to \$1,585,384.16, an increase of \$216,143.57. Particulars of expenditure may be found in Statement "D".

Salaries showed an increase of \$128,665.61 over the previous year.

Firefighting costs amounted to \$87,129.48, and the amount paid as bounties for destruction of pests was \$79,157.80.

Under the Government's policy of entering into agreements for the clearing and breaking of land in the Wanham district of the Province, an amount of \$412,233.87 was disbursed.

An agreement was entered into between the Dominion and the Province in which it was agreed to the establishment of the "Eastern Rockies Forest Conservation Board." As provided under the agreement, maintenance expenditure for the year under review amounted to \$146,838.14, while capital expenditures

were \$332,575.72. Under the terms of the agreement the Province was reimbursed for all capital expenditure.

Expenses of a Royal Commission appointed under Order-in-Council 1275/48 to enquire into the reserves of natural gas in the Province, amounted to \$27,302.02.

Under "The Crown Cultivation Leases Act" and "The Grazing Lease Taxation Act", the Department refunded to the taxing authority \$238,436.48. Refunds in the amount of \$42,721.39 were made to the taxing authority under "The Tax Recovery Act."

As at March 31st, 1949, there were 21,319 Accounts Receivable which were made up as follows:—

	No. of Accounts
School Land Sales	347
Provincial Land Sales	119
Accrued Areas Leases	666
Homestead Leases	4,040
Provincial Land Cultivation Leases	367
School Land Cultivation Leases	1,528
Tax Recovery Cultivation Leases	192
Grazing Leases	1,928
Lands, Miscellaneous	663
Timber Berths, Rental and Royalty	1,608
Special Timber Permits	880
Coal Leases, Rental and Royalty	806
Petroleum and Natural Gas Leases, Rental and Royalty	5,255
Petroleum and Natural Gas Reservations	280
Mineral Taxation (Producing Areas)	2,470
Mining, Miscellaneous	119
School Lands Coal Leases, Rental and Royalty	51
	<hr/>
	21,319

There were 2,801 accounts cancelled, closed or paid in full, and 6,506 new accounts were opened.

INDEX TO STATEMENTS

- A.—Statement of Receipts from all Sources.
- B.—Statement of Receipts—Income Account.
- C.—Statement of Receipts—Capital Account.
- D.—Statement of Expenditure by Appropriations and Character.
- E.—Statement of Receipts—Agricultural Advances.
- F.—Statement of Receipts—Special Areas and Special Districts.
- G.—Statement of Net Receipts by Branches.
- H.—Statement of Receipts—School Lands.
- I.—Alberta School Lands Trust Fund.
- J.—Alberta School Lands Sales—Revenue Account.
- K.—Statement of Receipts and Expenditure for Nineteen-Year Period 1930-1949.
- L.—Statement of Receipts by Branches for Nineteen-Year Period 1930-1949.
- M.—Yearly Net Revenue Expenditure and Surplus on Income Account.

STATEMENT A

STATEMENT OF RECEIPTS FROM ALL SOURCES

From April 1, 1948 to March 31, 1949

	Gross Receipts	Refunds	Net Receipts
	\$	\$	\$
Income Account	17,705,638.97	345,204.86	17,360,429.11
Capital Account	33,414.26	208.71	33,206.66
Reimbursement of Previous Year's Expenditure	7,809.44	.....	7,809.44
School Lands Trust Fund	174,695.21	70.54	174,624.67
Special Areas and Special Districts	239,732.40	8,613.16	231,119.26
Unapplied Receipts Carried Forward (Subject to Refund)			
Suspense	6,057,765.76	4,208,644.58	1,864,111.18
Tax Recovery	59,922.00	43,570.63	16,361.37
Improvements	3,461.80	1,626.55	1,836.25
Purchase of Improvements on Homestead Leases	1,026.80	.....	1,026.80
Purchase of Improvements on School Lands	75.00	30.00	45.00
Land Patent Cultivation Crop Share	36,113.54	.....	36,113.64
Land Patent Homestead Lease Crop Share	7,766.01	.....	7,766.01
School Lands Cultivation Crop Share	36,470.59	.....	36,470.59
Grazing Rentals, Fees, etc.	127,469.00	.....	127,469.00
	<hr/> <u>\$24,491,346.78</u>	<hr/> <u>\$4,602,969.02</u>	<hr/> <u>\$19,888,376.76</u>

STATEMENT B

STATEMENT OF RECEIPTS INCOME ACCOUNT

From April 1, 1948 to March 31, 1949

	Gross Receipts \$	Refunds \$	Net Revenue \$
INCOME ACCOUNT			
Fisheries Act:			
Angling Permits	24,602.60	11.95	24,591.65
Boat Licenses	135.00	.....	135.00
Fisheries Royalty	16,776.31	.....	16,776.31
Fishing Licenses	19,323.00	15.00	19,308.00
Miscellaneous	642.96	5.00	637.96
Game Act:			
Fur Tax	126,434.68	3,024.45	123,410.23
Game Licenses	173,936.38	337.82	173,548.56
Registered Trap Lines	30,270.00	110.00	30,160.00
Sale of Fur	3,061.31	363.62	2,697.69
Miscellaneous	429.14	.....	429.14
Lands and Grazing:			
Homestead Leases	56,287.98	26,851.46	29,936.52
Cultivation Rentals, fees, etc.	63,736.39	36,709.41	27,026.98
Fur Farm Rentals and fees	477.96	25.00	452.96
General Sales Interest	2,208.54	4.22	2,204.32
Grazing Rentals, fees, etc.	251,707.24	25,746.03	225,961.21
Hay fees, Dues, etc.	8,107.04	474.25	7,632.79
Improvement Collection fees	487.00	.....	487.00
Surface Rentals	6,191.62	.....	6,191.62
Miscellaneous	48,415.39	2,464.62	45,950.77
MINERAL TAXATION ACT:			
Mining Lands:			
Coal Mines Act Sundry Revenue	7,420.96	23.00	7,397.96
Coal Rentals, Fees, etc.	183,619.02	9,565.46	174,053.56
Coal Royalties	600,424.43	.....	600,424.43
Petroleum and Natural Gas			
Fees, Rentals	2,157,270.60	6,710.45	2,150,560.15
Petroleum and Natural Gas Royalties	1,620,573.71	1,297.28	1,619,276.43
Purchase Price for Leases	8,720,507.01	.....	8,720,507.01
Mining Miscellaneous	50,008.02	81.20	49,926.82
School Lands:			
Administration of School Lands, Reimbursements	67,500.00	.....	67,500.00
Interest on Sales	16,717.16	21.59	16,695.57
Royalties, Leases, Rentals, etc.	971,196.94	172,469.23	798,727.71
Timber:			
Timber Rentals, Fees, Dues, etc.	1,686,876.53	54,863.35	1,632,013.18
Miscellaneous	7,919.46	4.72	7,914.74
UNEARNED INCREMENT TAX:			
EAST SLOPE SURFACE RIGHTS REVENUE			
EAST SLOPE SURFACE RIGHTS REVENUE	135,244.44	3,565.05	131,679.39
CLEARING AND BREAKING PROJECT:			
Seed Grain Interest .....	.....	.....	.....
Miscellaneous:			
Casual	26,515.34	181.93	26,333.41
Reimbursement of Salaries & Expenses	3,730.65	.....	3,730.65
Rental of Houses	624.00	.....	624.00
Photostat Prints	2,643.74	.....	2,643.74
Services and Supplies	653.90	.....	653.90
Tax Recovery Office Fees	590.10	80.00	510.10
TOTAL INCOME ACCOUNT			
(Carried to Statement A)	\$ 17,705,633.97	\$ 345,204.86	\$ 17,360,429.11

STATEMENT C

STATEMENT OF RECEIPTS CAPITAL ACCOUNT

From April 1, 1948 to March 31, 1949

	Gross Receipts \$	Refunds \$	Net Revenue \$
Land Sales Principal	\$ 33,212.39	\$ 208.71	\$ 33,003.68
Clearing and Breaking Project—	.....	.....	.....
Seed Grain Principal	201.87	.....	201.87

	\$ 33,414.26	\$ 208.71	\$ 33,205.55

Government of the Province of Alberta
LANDS AND MINES DEPARTMENT

EXPENDITURE CLASSIFIED BY APPROPRIATIONS AND CHARACTER

For the Year Ended March 31, 1949

INCOME ACCOUNT

Service	1101 Minister's Office	1102 General Office	1103 Advisory Board	1106 Calgary Land Agency	1109 Peace River Land Agency	1113 Northern Alberta Forest District	1117 Brazeau-Athabasca Forest Reserve	1120 Cypress Hills Forest Reserve	1123 Petroleum and Natural Gas Division	1124 The Mines Act	1125 Grazing Reserves	1127 Fire Fighting, General	1128 Postage	1129 Tree Nurseries	1132 Radio Communication	1135 The Games Act	1136 The Fisheries Act	1139 Forestry Survey	1140 Eastern Rockies Forest Conservation	SW. 41 & 81, 1948-49, Royal Commission ap- pointed to enquire into Reserves of Natural Gas in the Province of Alberta	Totals		
Advertising	\$ 10,566.02	\$ 13,301.27	\$ 1,157.10																\$ 10,863.19				
Automobiles																			762.45				
Board																			2,583.29				
Books and Binding																			79,157.80				
Bounties for destruction of pests																			4,547.54				
Buildings and sites																			7,710.78				
Cinema and photographic supplies																			40,473.69				
Clothing																			1,320.17				
Equipment																			13,732.10				
Examinations																			446.40				
Feed and seed																			56.20				
Fees and commissions																			10,055.00				
Fencing																			30,459.75				
Freight, express and cartage																			3,224.73				
Grants																			24.17				
Heating, lighting and power																			36.60				
Hospital and medical supplies																			8,529.90				
Laundry and cleaning																			9,929.95				
Legal fees and expenses																			13,663.93				
Miscellaneous expenses and supplies																			137.80				
Newspapers and periodicals																			554.00				
Postage																			16,211.58				
Printing, stationery and office supplies																			37,090.09				
Rates, rentals and insurance																			31,101.15				
Repairs and replacements																			42,147.90				
Salaries																			918,263.38				
Special services																			10,294.23				
Surveys																			58,213.81				
Telegrams and Telephones																			1,813.40				
Travelling expenses																			7,046.12				
Wages																			11,358.82				
																			5,088.12				
																			120,868.67				
																			81,886.20				
TOTAL: Income Account	\$ 10,322.28	\$ 495,363.96	\$ 533.32	\$ 23,184.78	\$ 18,588.23	\$ 212,570.52	\$ 73,558.74	\$ 6,314.26	\$ 47,846.03	\$ 61,825.18	\$ 9,484.32	\$ 87,129.48	\$ 12,746.35	\$ 4,036.56	\$ 51,915.77	\$ 70,263.37	\$ 112,325.36	\$ 79,157.80	\$ 30,459.75	\$ 3,617.95	\$ 146,838.14	\$ 27,302.02	\$ 1,585,384.16

CAPITAL ACCOUNT

Service	1182 Abandonment of Mining Properties	1183 Land Settlement—Clearing and Breaking Land	S.W. 47/48-49, Clearing and breaking land pursuant to agreement between Province and Peter Simonsen	S.W. 40/48-49, Clearing and breaking land pursuant to agreement between Province and Nick & Edward Johnson	Totals
Automobiles					
Clearing and breaking land	\$ 455.79	\$ 359,567.87	\$ 32,340.00	\$ 15,306.00	\$ 455.79
Contract labour					
Equipment					
Freight, express and cartage					
Miscellaneous expenses and supplies					
Postage					
Rates, rentals and insurance					
Repairs and replacements					
Salaries					
Telegrams and telephones					
Travelling expenses					
TOTAL: Capital Account	\$ 132.00	\$ 365,901.76	\$ 32,340.00	\$ 15,306.00	\$ 5,020.00
					\$ 418,699.76

STATEMENT E

**STATEMENT OF RECEIPTS
AGRICULTURAL ADVANCES**
From April 1, 1948 to March 31, 1949

	Principal	Interest
1936 Seed Grain	\$ 323.76	\$
1937-38 Feed and Fodder	252.39	.....
1938-39 Feed and Fodder	2.08	.....
1937 Seed Grain Implemented Loan Account	547.28	.....
1938 Agricultural Advances Implemented Loan Account.....	1,104.94	.....
To Statement F.	<u>\$ 2,230.45</u>	<u>\$</u>

STATEMENT F

**STATEMENT OF RECEIPTS
SPECIAL AREAS AND SPECIAL DISTRICTS**
For the Year Ending March 31, 1949

	Gross Receipts	Refunds	Net Receipts
Special District Taxes to May 31, 1948.....	\$ 25,766.73	\$ 1,159.20	\$ 24,607.53
Social Service Tax	550.50	.....	550.50
Total Tax Collections	26,317.23	1,159.20	25,158.03
Special Districts Collections	3,216.90	.....	3,216.90
Special Areas Trust Receipts	207,967.82	7,453.95	200,513.87
Agricultural Advances	2,230.45	.....	2,230.45
	<u>\$ 239,732.40</u>	<u>\$ 8,613.15</u>	<u>\$ 231,119.25</u>

Note: Special Areas Tax Accounts transferred to Department of Municipal Affairs May 31st, 1948.
Administration of Public Lands situated in the Special Areas transferred to Department of Municipal Affairs January 1st, 1949.

STATEMENT G

STATEMENT OF NET RECEIPTS BY BRANCHES
For the Fiscal Years Ending March 31, 1948 and March 31, 1949

	Fiscal Year Ending March 31, 1948	Fiscal Year Ending March 31, 1949
INCOME ACCOUNT:		
Fisheries Branch	\$ 64,023.12	\$ 61,448.92
Game Branch	274,264.05	330,245.62
Lands and Grazing Branch	331,170.33	345,844.17
Timber Branch	1,539,002.65	1,630,927.92
Mining Lands Branch	1,890,520.10	13,322,146.36
Mineral Tax	473,834.98	566,069.47
Unearned Increment Tax	17,379.02	45,523.71
School Lands	387,264.76	882,923.28
East Slope Surface Rights .....	.....	131,679.39
Clearing and Breaking Project—		
Seed Grain Interest .....	.....	124.47
Miscellaneous	73,186.07	34,495.80
CAPITAL ACCOUNT:		
Land Sales Principal	23,390.81	33,003.68
Clearing and Breaking Project—		
Seed Grain Principal .....	.....	201.87
TRANSFERRED TO OTHER DEPARTMENTS	28,585.83	7,809.44
SCHOOL LANDS TRUST FUND	107,308.60	174,624.67
SPECIAL DISTRICTS	575,035.82	28,374.93
SPECIAL DISTRICTS AGRICULTURAL ADVANCES	19,872.39	2,230.45
SPECIAL AREAS	251,145.54	200,513.87
UNAPPLIED RECEIPTS CARRIED FORWARD:		
Suspense	405,767.11	1,870,462.55
Improvements	1,896.90	1,835.25
Purchase of Improvements on Homestead Leases	375.00	1,026.80
Purchase of Improvements on School Lands	75.00	45.00
Land Patent Cultivation Crop Share	5,641.23	36,113.54
Land Patent Homestead Lease Crop Share	5,871.61	7,766.01
School Lands Cultivation Crop Share	30,029.61	36,470.59
Grazing Rentals, Fees, etc.	37,304.01	127,469.00
	<u>\$ 6,537,944.04</u>	<u>\$19,888,376.76</u>

DEPARTMENT OF LANDS AND MINES

STATEMENT H

STATEMENT OF RECEIPTS—SCHOOL LANDS
From April 1, 1948 to March 31, 1949

	Receipts	Refunds	Net Revenue
INCOME ACCOUNT:			
Interest on Sales	\$ 16,717.16	\$ 21.59	\$ 16,695.57
Grazing Rentals, Fees, etc.	38,799.37	156.41	38,642.96
Hay Fees, Dues, etc.	1,303.60	126.75	1,176.85
Cultivation Rentals, Fees, etc.	345,304.38	167,998.65	177,305.73
Surface Rentals	413.98	.....	413.98
Fur Farm Rentals	19.78	.....	19.78
Miscellaneous Leases, etc.	6,949.02	231.72	6,717.30
Timber Rentals, Fees, Dues, etc.	65,782.45	3,835.70	61,946.75
Coal Rentals, Fees, etc.	3,854.52	120.00	3,734.52
Coal Royalties	46,115.23	.....	46,115.23
Petroleum and Natural Gas Fees and Rentals	204,553.54	.....	204,553.54
Petroleum and Natural Gas Royalties	134,296.57	.....	134,296.57
Petroleum and Natural Gas Purchase Price for Lease	191,296.50	.....	191,296.50
Mining Miscellaneous	8.00	.....	8.00
	\$1,055,414.10	\$ 172,490.82	\$ 882,923.28
TRUST ACCOUNT:			
School Land Sales Principal	174,695.21	70.54	174,624.67
	\$1,230,109.31	\$ 172,561.36	\$1,057,547.95

STATEMENT I

ALBERTA SCHOOL LANDS TRUST FUND
Balance Sheet—March 31, 1949

As at March 31, 1949, the fund amounted to \$12,161,564.94 made up as follows:

Cash	44,495.09
Accounts Receivable	39,398.41
Debentures of the Dominion of Canada:	
(a) Issued in settlement of the sum standing to the credit of the fund when the natural resources were transferred to the Province on October 1, 1930	\$9,564,569.20
(b) Purchased by the Province since October 1, 1930 from payments of principal on School Land Sales, book value	2,119,689.76
	11,684,258.96
Unpaid principal on school land sales:	
(a) Not due	309,302.71
(b) Due or in arrears	84,109.77
	393,412.48
	\$12,161,564.94

STATEMENT J

ALBERTA SCHOOL LANDS SALES—REVENUE ACCOUNT
From April 1, 1948 to March 31, 1949

Arrears Interest as at March 31, 1949	\$ 21,603.79	\$
Interest Charges	10,454.72	16,695.57
Interest Revenue		
Interest Written Off— Re Cancelled School Lands Sales		1,265.27
Arrears Interest as at March 31, 1949		14,097.67
	\$ 32,058.51	\$ 32,058.51

ACCOUNTING DIVISION

125

STATEMENT K

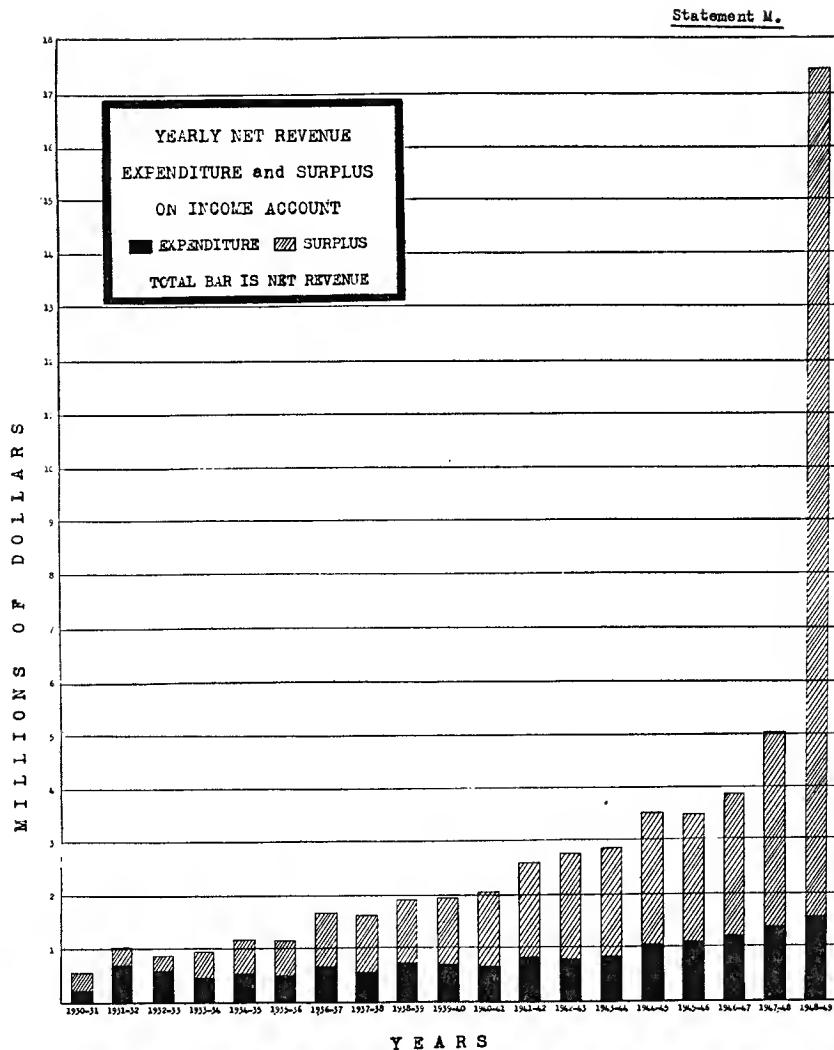
STATEMENT OF RECEIPTS AND EXPENDITURE
For 19 Year Period 1930-1949

	Gross Receipts	Refunds	Net Receipts	Net Revenue on Income Account	Total Expenditures from Appropriations	Surplus on Income Account
1930-31	\$ 713,921.44	\$ 4,036.85	\$ 709,884.59	\$ 572,965.86	\$ 224,197.32	\$ 348,768.54
1931-32	1,135,415.64	6,407.90	1,129,007.74	1,032,307.57	690,448.51	34,839.06
1932-33	963,329.06	14,659.34	954,269.72	861,477.66	571,861.51	28,616.15
1933-34	1,063,550.48	16,772.56	1,057,779.92	937,095.80	462,407.61	474,688.19
1934-35	1,387,394.04	26,445.07	1,310,948.97	1,169,496.15	522,967.18	645,588.97
1935-36	1,310,890.21	42,051.55	1,263,838.66	1,152,475.78	504,544.57	647,931.21
1936-37	1,807,855.35	42,707.76	1,765,147.59	1,646,486.99	648,776.50	936,719.59
1937-38	1,784,276.20	68,941.29	1,720,334.91	1,666,156.39	522,564.72	1,084,531.78
1938-39	2,157,754.87	47,657.63	2,078,097.24	1,864,712.55	709,624.60	1,156,088.15
1939-40	2,629,622.16	72,133.44	2,557,488.72	1,944,093.82	708,605.34	1,238,493.48
1940-41	2,941,633.35	57,813.81	2,853,195.54	2,031,494.38	670,278.85	1,362,215.53
1941-42	3,961,61.44	49,942.02	3,468,441.42	2,593,485.14	847,555.32	1,746,929.82
1942-43	3,920,989.55	264,632.43	3,656,357.22	2,753,159.00	806,948.41	1,946,210.59
1943-44	4,560,913.73	416,578.27	4,088,335.46	2,821,784.73	861,907.08	1,955,897.65
1944-45	5,329,173.91	815,106.35	4,514,067.56	3,484,630.31	1,041,889.92	2,442,910.39
1945-46	5,316,087.01	949,402.77	4,366,684.24	3,403,432.33	1,100,538.26	2,307,915.07
1946-47	6,196,130.56	1,001,400.93	5,194,729.63	3,880,445.42	1,219,447.73	2,661,970.69
1947-48	7,772,823.80	1,214,879.76	6,537,940.04	5,050,777.39	1,369,240.59	3,681,496.80
1948-49	24,449,1345.78	4,662,969.02	19,888,376.76	17,360,429.11	1,585,384.16	15,771,044.95
	\$79,308,668.68	\$10,199,016.75	\$69,109,651.93	\$56,166,901.79	\$15,069,165.18	\$41,097,736.61

STATEMENT L

STATEMENT OF RECEIPTS BY BRANCHES
For 19 Year Period 1930-1949

	Fisheries Branch	Game Branch	Lands and Grazing Branch	Unearned Increment Tax	Timber Branch	Mining Lands Branch	East Slope Surface Rights	Clearing and Breaking Project Seed Grain Interest	School Lands	Mineral Tax	Miscellaneous	Land Sales Principal	Clearing and Breaking Project Seed Grain Principal	Transferred to Other Departments	School Lands Trust Fund	Special Areas and Special Districts	Unapplied Receipts	Trust Accounts	Total Receipts			
1930-31	\$ 4,827.54		\$ 74,996.87		\$ 121,086.59	\$ 372,055.86			271,760.18			\$ 6,705.39			\$ 113,749.01		\$ 16,009.29	\$ 1,465.04	\$ 709,884.59			
1931-32	20,203.47		114,664.30		174,400.21	450,681.94						\$ 597.47	8,438.60			43,947.85	36,319.67	7,094.05	1,129,007.74			
1932-33	15,827.10		114,389.01		123,707.36	391,813.38			215,327.81			413.00	7,522.85			40,065.81	26,737.56	18,466.84	964,269.72			
1933-34	15,989.61		117,789.55		153,818.78	477,724.11			168,571.71			3,202.04	7,938.25			56,136.23	40,924.25	9,783.39	1,061,877.92			
1934-35	19,949.89		115,599.20		225,063.17	477,296.68			327,787.36			3,799.85	9,765.20			80,132.43	40,316.83	11,238.36	1,310,948.97			
1935-36	21,418.16		80,910.52		303,964.31	547,483.63			191,587.19			7,111.97	9,643.65			62,555.30	39,133.13	30.80	1,263,838.66			
1936-37	24,317.93	\$ 117,989.34	111,610.39		331,036.53	757,247.46			293,763.48			10,530.96	10,867.23			55,799.89	51,803.38	181.00	1,766,147.59			
1937-38	.		181,412.38		360,380.18	818,609.83			234,027.61			11,726.50	9,525.14			48,442.09	56,211.18		1,720,334.91			
1938-39	.		159,415.63		298,434.00	1,032,502.10			358,197.11			16,163.91	8,593.93			86,322.26	\$ 68,299.49	50,168.81	2,078,097.24			
1939-40	.		148,286.74		359,786.16	1,050,221.46			371,626.59			14,177.87	8,702.54			\$ 19,888.05	83,664.73	418,068.06	83,066.52	2,667,488.72		
1940-41	.		125,544.35		612,175.84	945,333.30			337,777.81			10,663.08	9,511.39			851.49	76,589.34	633,745.14	101,627.80	2,863,819.64		
1941-42	22,298.59	161,122.17	145,981.43		732,179.40	1,073,084.50			368,056.87	\$ 75,120.93		15,066.17	10,416.91			7.36	127,874.26	594,010.46	143,222.37	3,468,441.42		
1942-43	21,975.49	157,280.99	161,376.91		774,172.70	1,215,777.93			311,612.10	94,364.68		16,331.46	11,100.94			200.00	145,341.71	543,062.32	203,759.99	3,656,367.22		
1943-44	29,194.09	172,229.45	151,059.84		843,106.86	1,112,506.30			395,325.32	102,075.15		16,267.66	15,810.92			103.10	292,923.42	674,346.65	283,386.70	4,088,335.46		
1944-45	33,264.10	185,638.47	220,599.44		843,680.79	1,663,316.88			420,062.24	92,738.29		25,225.25	22,125.48			78.32	349,104.99	445,110.94	213,077.37	4,614,067.66		
1945-46	41,318.68	226,133.25	286,725.61	\$ 4,848.43	1,003,395.03	1,360,104.48			299,800.41	160,126.13		20,909.94	18,252.17			813.77	180,556.66	468,393.63	294,226.61	4,365,603.80		
1946-47	66,603.75	299,089.85	274,869.40	37,598.66	1,259,935.31	1,246,501.46			324,828.06	356,836.84		14,000.35	21,425.34			3,932.17	143,103.52	705,318.37	440,686.55	5,194,729.63		
1947-48	64,023.12	274,264.05	331,170.33	17,379.02	1,539,002.65	1,890,520.10			387,264.76	473,834.98		73,186.07	23,390.81			23,585.33	107,308.60	846,960.47	6,637,944.04	6,637,944.04		
1948-49	61,448.92	330,245.62	345,844.17	45,523.71	1,639,927.92	13,322,146.36		\$ 131,679.39	\$ 124.47	882,923.28	566,069.47		34,495.80	33,003.68		\$ 201.87	7,809.44	174,624.67	231,119.25	2,081,188.74	19,888,376.76	
	\$ 462,660.44	\$ 1,923,993.19	\$ 3,262,246.07	\$ 105,349.82	\$ 11,699,252.79	\$ 30,204,927.76		\$ 131,679.39	\$ 124.47	\$ 6,160,299.89	\$ 1,921,211.47		\$ 293,869.35	\$ 252,740.42		\$ 201.87	\$ 57,269.03	\$ 2,268,241.77	\$ 5,627,528.06	\$ 4,687,827.22	\$ 49,148.48	\$ 69,108,571.49



STATEMENT OF MINING LANDS REVENUE BY FISCAL YEARS RECEIVED BY THE PROVINCE FOLLOWING OCTOBER 1, 1930

Fiscal Years	COAL				PETROLEUM AND NATURAL GAS						SALT				QUARRYING		DREDGING		SAND, STONE & GRAVEL		QUARTZ		PLACER & BAR-DIGGINGS		BITUMINOUS SANDS		MISCELLANEOUS		Provincial Lands		School Lands		TOTAL	Fiscal Years
	Provincial Lands		School Lands		Provincial Lands			School Lands			Provincial Lands		School Lands		Provincial Lands		School Lands		Provincial Lands		School Lands		Provincial Lands		School Lands									
	Fees and Rentals	Royalties	Fees and Rentals	Royalties	Fees and Rentals	Royalties	Crown Reserve Sales	Fees and Rentals	Royalties	Crown Reserve Sales	Fees and Rentals	Royalties	Fees and Rentals	Royalties	Fees and Rentals	Royalties	Fees and Rentals	Royalties	Fees and Rentals	Royalties	Fees and Rentals	Royalties												
1930-31	\$ 66,225.59	\$ 105,126.51	\$ 5,103.58	\$ 5,014.29	\$ 87,373.46	\$ 110,882.84	.....	\$ 8,990.72	\$ 262.94	.....	\$ 424.12	.....	\$ 55.00	\$ 131.94	.....	\$ 10.00	.....	\$ 26.90	.....	\$ 1,799.50	.....	\$ 372,056.86	\$ 19,371.53	\$ 391,427.39	1930-31		
1931-32	132,415.11	145,170.33	5,788.21	6,354.09	57,868.87	106,103.05	.....	8,455.94	383.60	.....	2,155.37	214.38	588.13	.....	\$ 205.00	50.00	49.80	.....	1,228.20	446,048.34	20,981.84	467,030.18	1931-32							
1932-33	125,750.49	143,800.01	6,110.57	4,971.78	42,117.70	73,182.96	.....	3,718.94	253.46	.....	1,032.22	243.60	262.18	.....	370.00	82.50	224.56	.....	387,066.22	15,054.76	402,120.97	1932-33								
1933-34	120,977.90	193,527.32	5,463.01	9,520.13	81,540.10	73,548.27	.....	12,099.71	333.64	.....	1,727.87	214.38	374.90	.....	230.00	294.50	\$ 30.00	.....	373.48	472,809.22	27,446.49	600,255.71	1933-34							
1934-35	128,482.81	176,122.43	5,310.92	12,365.39	104,375.89	61,265.88	.....	13,630.73	283.08	.....	1,206.38	541.00	365.97	\$ 34.92	250.00	100.00	10.00	183.57	472,893.93	31,635.04	604,428.97	1934-35										
1935-36	117,741.55	156,691.23	5,398.41	19,779.76	115,593.55	117,468.36	.....	10,875.87	699.33	.....	1,201.94	209.00	535.00	734.07	41.80	2,105.00	95.88	10.00	36.60	42.99	643,164.83	36,806.17	579,960.00	1935-36								
1936-37	116,137.98	175,214.33	5,214.63	18,596.00	348,291.29	108,321.19	.....	89,049.20	614.09	.....	646.90	\$ 62.00	1,998.08	188.00	399.80	344.58	93.00	340.00	105.66	.....	275.00	279.15	\$ 14,00	752,603.96	113,671.92	866,175.88	1936-37				
1937-38	114,954.69	155,227.11	4,824.02	15,159.15	254,844.04	249,266.53	.....	35,355.10	24,257.57	.....	511.10	10.50	1,577.94	790.16	200.00	942.90	167.75	233.53	55.04	1,877.07	304.37	813,824.98	79,763.69	893,688.57	1937-38							
1938-39	106,765.27	143,070.78	4,665.98	9,276.23	372,449.99	394,453.43	.....	40,735.42	128,312.33	.....	32.68	995.21	1,471.94	1,133.65	485.00	669.62	109.80	98.17	198.27	5,894.70	\$ 1.80	161.01	1,027,779.72	183,095.66	1,210,875.28	1938-39						
1939-40	111,283.05	168,502.75	4,910.47	7,812.78	349,687.68	408,304.20	.....	37,146.62	115,512.11	.....	32.56	540.22	1,335.15	1,213.51	3,003.43	68.00	83.48	205.63	7,973.70	488.43	1,043,958.03	164,900.98	1,208,859.01	1939-40								
1940-41	85,425.98	200,565.03	4,197.79	15,841.24	229,844.78	41,946.65	.....	36,296.74	113,371.4	.....	5,56	2,190.00	1,253.85	996.62	135.00	3,604.63	129.25	132.72	\$ 10.00	366.20	20.00	3,986.85	86.08	940,129.80	167,860.16	1,107,989.96	1940-41					
1941-42	80,530.44	216,777.95	4,269.87	22,845.83	159,435.95	570,604.94	.....	25,382.11	88,295.81	.....	43.00	3,711.16	1,422.99	1,523.48	43.00	1,926.50	6,597.40	447.60	313.83	190.00	5,655.30	5,020.07	329.93	1,068,617.14	141,025.92	1,209,643.06	1941-42					
1942-43	79,742.23	235,413.19	4,288.14	24,704.43	267,612.47	575,833.12	24,065.16	54,360.45	27,186.60	4,247.87	1,283.75	1,926.50	1,926.50	1,926.50	170.20	246.72	187.98	60.00	1,806.00	140.00	3,834.40	4,693.66	1,167,332.45	88,772.26	1,196,164.71	1942-43					
1943-44	88,259.67	239,508.06	5,041.39	10,732.39	239,824.05	509,325.82	16,747.75	46,862.33	13,441.64	3,379.66	1,516.58	3,718.90	5,471.40	358.00	196.22	10.00	1,476.98	1,365.82	5,543.21	\$ 1,300.00	1,476.98	25.73	3,620.91	1,658,998.41	129,557.80	1,788,556.21	1943-44					
1944-45	113,706.87	251,136.50	4,329.90	22,041.1	598,352.20	669,250.71	62,678.16	38,968.00	1,365.82	8,223.45	162.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	14,545.37	1,223.47	3,635.93	1,354,969.98	94,362.18	1,449,266.16	1944-45	
1945-46	150,476.68	260,144.66	4,021.68	27,514.41	352,651.07	550,340.47	.....	22,980.82	5,791.70	.....	8,223.45	22,980.82	8,52	1,506.71	1,490.65	25.00	70.00	20.00	14,545.37	1,223.47	3,635.93	1,354,969.98	94,362.18	1,449,266.16	1945-46							
1946-47	108,017.04	286,486.89	4,106.73	30,611.98	272,342.03	536,230.33	.....	15,412.02	6,745.82	.....	1,501.09	4,466.65	2,805.00	4,067.60	226.35	66.94	12.83	10.00	6,302.94	4,724.28	1,240,101.44	123,056.68	1,363,167.12	1946-47								
1947-48	117,786.17	261,654.86	4,150.00	26,660.60	706,700.80	765,182.10	.....	53,001.15	110,056.77	.....	1,010.27	5,545.68	510.00	4,000.80	219.90																	

Registration Division

Report of the Registrar, C. B. Kenway

Work in this Division has proceeded very satisfactorily during the past year. Although there was a further reduction in the amount of incoming mail from that received during the previous year, the spare time thus created by the reduction, was readily utilized in splitting files and records for the two new Departments of Lands and Forests and Mines and Minerals. Similarly, files and records had to be split for lands in the Special Areas which were transferred to the administration of the Department of Municipal Affairs.

Long before the 1st of April, 1949, when the new departments came into being, the records and files were ready for these two departments. However, at the time of writing the separation of Special Areas files had not yet been completed to the point where it is no longer necessary to "back-check"; even though the work was progressing satisfactorily.

The incoming and outgoing mail always provides a good barometer of business transacted, and in this connection, the mail figures for the past year are given in Table I, together with the figures for the previous year for comparison:—

TABLE I
NUMBER OF LETTERS RECEIVED AND MAILED FOR THE
YEAR 1948-49 IN COMPARISON WITH THE PREVIOUS YEAR 1947-48

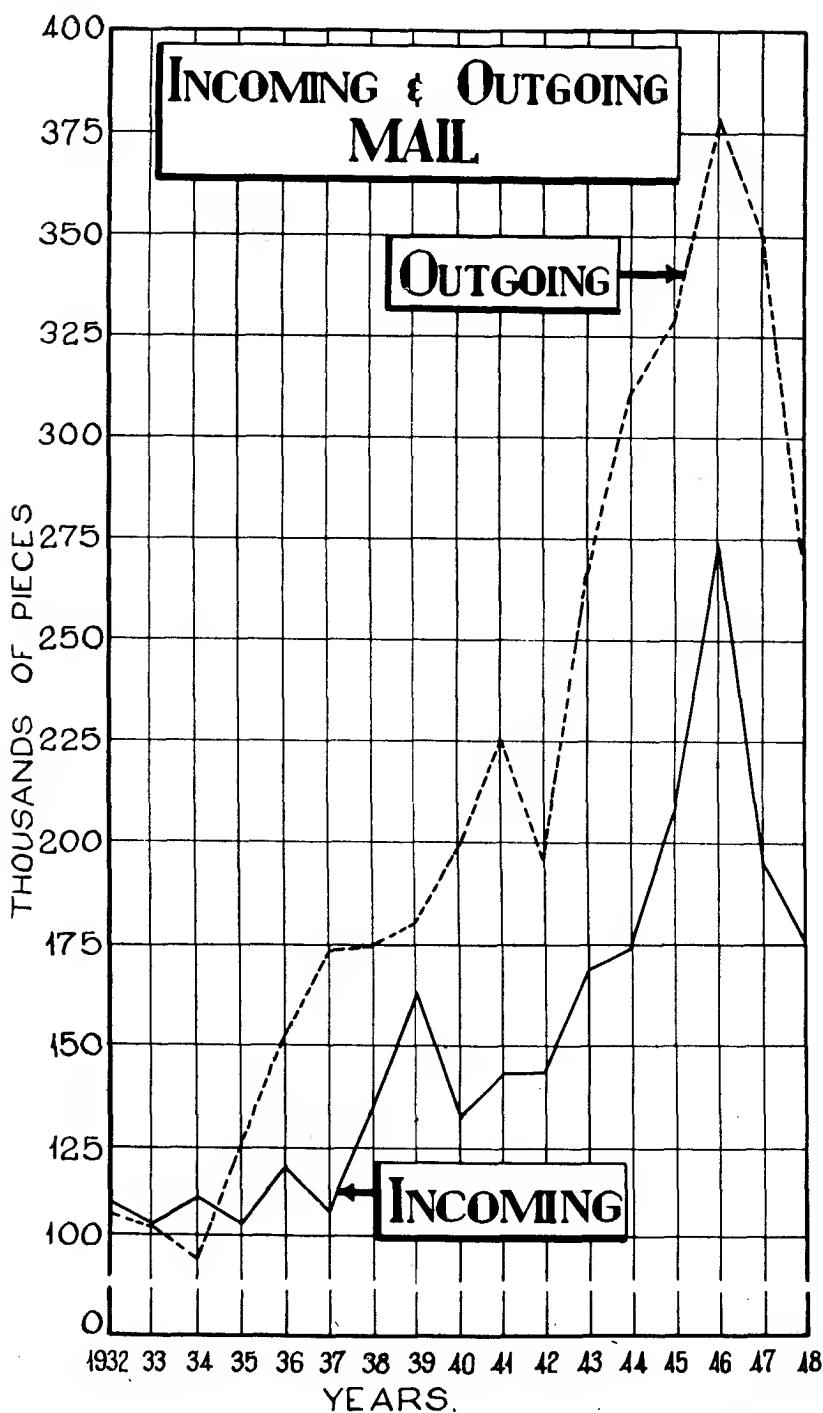
	Letters Received		Letters Mailed		Total	
	1947-48	1948-49	1947-48	1948-49	1947-48	1948-49
April	17,027	20,494	22,733	25,280	39,760	45,774
May	16,664	14,522	25,298	19,438	41,962	33,960
June	16,564	15,351	24,935	23,723	41,499	39,074
July	16,395	11,717	21,407	17,282	37,802	28,999
August	13,099	10,444	19,109	19,233	32,208	29,677
September	16,011	12,330	48,265	26,296	64,276	38,626
October	14,655	13,783	54,768	22,682	69,423	36,465
November	15,378	16,175	25,118	21,082	40,496	37,257
December	17,822	15,342	22,468	23,228	40,290	38,570
January	18,743	15,008	28,590	26,017	47,338	40,025
February	14,507	13,752	31,467	28,456	46,974	37,208
March	18,710	16,726	25,569	19,938	44,279	36,664
TOTAL	195,575	175,644	349,727	266,655	545,302	442,299
Monthly Average	16,298	14,637	29,144	22,221	45,442	36,858

The above table shows a reduction in both the incoming and outgoing mail over the previous year, being particularly noticeable in the outgoing mail. The reduction in the mail from the post-war peak of 1946-47 is clearly shown in the graph on the next page, and in line with the writer's prediction in the report of that year.

RECORDS

The Records section's work for the past year has not changed considerably from that of the previous year. The extra time saved by the transfer of the Special Areas to the Department of Municipal Affairs was readily utilized in extra checking and re-writing of records.

During the past two years requests for standings have been



quite numerous, which is a good indication that the township records are being consulted before any dispositions are made.

There was an increase in the number of forestry reservations, 526 being entered during the past year against 488 for the previous year. Similarly, applications for timber berths increased from 163 in 1947-48 to 190 for the year under review.

Decreases were noted in the number of assignments registered, 439 against 516, and in the case of notification for patents, 635 against 878, the larger figures in both cases, being the figures for 1947-48.

Only 10 township registers were transcribed, as one of the transcribers spent the greater part of her time in routine entering.

Much work has yet to be done on the registers to the point where the writer considers them satisfactory. It is not possible within a few years to change a set of books and pick up the errors, omissions and revisions accumulated in three-quarters of a century.

MICROFILMING

Two-hundred and fifteen films were exposed in the Recordak in the photographing of files. This was sixteen more than were used in either of the two previous years.

It is regretted that the larger commercial Recordak machines are not available, as the model used is limited in its daily capacity. As soon as a commercial model can be imported it is recommended that one be obtained, as the capacity of such machine is about double that of the present model.

In order to provide additional vault space, over 100 cabinets of photographed files were destroyed. These files had been held pending further instructions on their disposal. With the inception of the new Department of Lands and Forests, files will be destroyed weekly as soon as the developed film is checked against the original.

FILING

Long before the splitting of the Department had been officially announced, steps were taken in the filing section to mark the Kardex cards that would have to be separated from the general index, if such a split occurred. Thus, by September, six months before the inception of the new Department of Mines and Minerals, the cards required by them were set up and handled as a separate unit until their transfer at March 31st.

The transfer of the Special Areas files to the Department of Municipal Affairs, has been an arduous job, as they were incorporated into the filing system as an integral part of the land files, and not handled as a separate unit, as were the mining files. Although the work has progressed slowly, but satisfactorily under the circumstances, it has retarded considerably the work of changing the old cards to the new in the Kardex files.

A comparison of the new files opened for the past and previous years is shown in Table 2:

TABLE II
NEW FILES OPENED FOR THE YEARS 1947-48 AND 1948-49
WITH THE TOTAL NUMBER OF FILES AS AT MARCH 31, 1948

Kind of File	1947-48	1948-49	Total
General Lands	5,393	2,838	116,302
Lands Personal	1,297	1,035	4,871
Grazing Land	295	171	10,409
School Land	199	408	13,994
Right of Entry	54	55	240
Cabin	47	26	538
Timber	620	553	11,265
Timber Personals	1,185	951	6,644
Mining Land	1,926	2,910	44,296
Mining School Land	14	8	3,227
Mining Land License	33	85	209
Mining Land Company	18	36	1,053
Mining Land General	14	29	86
Mining Land Inc. Tax	5	0	10
Mining Land Deposits	100	63	163
	11,200	9,168	213,307

With the transfer of the Special Areas to the Municipal Affairs, the writer was loaned to that Department to complete various construction details in connection with the Youngstown project. Considerable time was spent between the months of June and September at Youngstown. On completion of the water line from the Town of Youngstown to the Special Areas Buildings, about the middle of September, no further assistance was required.

It is a pleasure at this time to thank the staff for their co-operation and loyalty in carrying out their everyday duties, which at times have not been easy, in a spirit of cheerfulness and perseverance.

